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(SERVING ELSEWHERE THAN IN THE
INDIAN EMPIRE),

INCLUDING THE

ARMAMENTS OF WORKS;

TO WHICH IS ADDED

AN APPENDIX.

WAR OFFICE, 1ST SEPTEMBER 1876.



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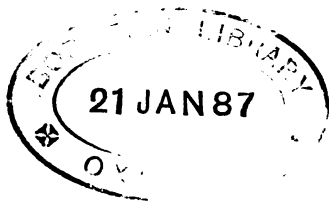
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VICTORIA R.

WHEREAS Our Principal Secretary of State for the War Department has submitted to Us Consolidated and revised Regulations for the Equipment of Our Army and the Armament of Our Works of Defence; and whereas We have been pleased to approve the same:—

OUR WILL AND PLEASURE is, that these REGULATIONS be the sole and standing authority on the matters herein treated of, excepting all matters relating to the Equipment of such part of Our Army as may be stationed in Our Indian Empire; provided always, that Our said Principal Secretary of State shall, until Our further pleasure be made known, have full power to make any modifications in the details of these Regulations which may be necessary in the interests of Our Service. The administration and interpretation of these Regulations shall likewise rest with Our said Principal Secretary of State.

Our Warrant of 11th September 1870, and the Regulations established thereby, are hereby cancelled.

Given at Our Court at Balmoral this 30th day of August 1876, in the 40th year of Our Reign.

By Her Majesty's Command,

GATHORNE HARDY.

DEFINITIONS.

N.B.—The following terms used in these Regulations will have the signification shown below :—

Secretary of State	-	-	The Secretary of State for War.
Commander-in-Chief	-	-	The Field-Marshal, or other Officer Commanding-in-Chief for the time being.
General Officer Commanding-	-		The General or other Officer Commanding any District or Station.
Commanding Officer	-	-	The Officer Commanding any Regiment, Corps, or Detachment.
Commissary General	-	-	The Officer at the Head of the Ordnance Store Department in any Military Command or District, unless stated to be the Commissary General of the Commissariat Department.
Consignor	-	-	The person who makes a consignment of stores.
Consignee	-	-	The person to whom stores are consigned.
Estimate for Equipment	-		The Annual Estimate of Equipment required by each Officer authorised to draw stores direct from the Ordnance Store Department, to maintain the equipment.
Requisition	-	-	A request for the issue from the stores of the Ordnance Store Department of articles required for use in any Regiment, Corps, or Detachment.
Regimental Artificers	-		Non-commissioned Officers and Soldiers on the Regimental Establishment as Artificers, receiving pay as such, for the performance of special work.
Military Tradesmen	-	-	Tradesmen enlisted as Soldiers, and receiving pay as such, but available when required for employment in their trades, receiving extra working pay.

ABBREVIATIONS.

<p>B.L.—Breech-loading. F.G.—Fine Grain. G.S.—General Service. L.G.—Large Grain. L.S.—Land Service. M.L.—Muzzle-loading. N.P.—New Pattern. O.P.—Old Pattern.</p>		<p>P.—Pebble. R.F.G.—Rifle Fine Grain. S.A.A.—Small Arm Ammunition. S.A.—Small Arm. S.B.—Smooth-bore. S.S.—Sea Service. W.I.—Wrought Iron.</p>
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PART I.—GENERAL REGULATIONS.

SECTION I.—DUTIES OF OFFICERS.

I.—Introductory.

II.—Duties of General Officers Commanding.

III.—Duties of Officers Commanding Artillery Districts and Corps.

I.—Introductory.

1. The following Regulations for the Equipment of the Army, and for the maintenance of the Armaments of works, are promulgated for the information and guidance of Officers concerned, and the proportions of ammunition and stores, materials for repair, tables of duration, and details of equipment, contained therein will be strictly adhered to.

II.—Duties of General Officers Commanding.

2. General Officers Commanding will be careful to keep themselves informed as to the condition of the armaments and equipments in their respective commands, more especially on the following points, respecting which they will call for specific information whenever they may consider it necessary:—

General responsibility.

- a. Whether the ordnance, carriages, and traversing platforms, on the several defences, are kept in an efficient and serviceable condition, and supplied with the authorised proportions of ammunition, side arms, and small stores. Whether they are under proper military protection, and complete in all details.
- b. Whether the quantity of made-up ammunition, kept in readiness for the immediate service of the ordnance, is according to Regulation.
- c. Whether the expense magazines are in proper condition and under adequate military protection.
- d. Whether the service field guns, with their carriages, ammunition, and equipments, are in an efficient state and under suitable cover.
- e. Whether the military equipments in charge of Officers Commanding Corps are in a thoroughly serviceable condition, and complete in their proportions.

3. In cases of urgent necessity which do not admit of previous reference to the War Office, the General Officer Commanding will direct the Commissary General to provide for the requirements of the Service according to circumstances, reporting, without delay, to the Secretary of State.

Power in urgent cases.

4. In the event of any unusual delay occurring in the supply of equipment, General Officers Commanding will report the circumstance with the explanation of the Commissary General, to the Adjutant General of the Forces.

Delay in supply.

SECT. I.

DUTIES OF OFFICERS.

III.—Duties of Officers Commanding Artillery Districts and Corps.

Responsibility
of Command-
ing Officers.

5. Officers Commanding Artillery Districts, Regiments, or Corps, will be held directly responsible that their equipments are in a serviceable condition, in proper working order and complete in all their details, and in the authorised proportions unless otherwise specially ordered. They will make frequent inspections of the whole of the equipments of the men and horses under their command, and when any defects are discovered therein, they will at once see that they are remedied.

In case of
change of
pattern, &c.

6. They will be held responsible, in the case of changes in pattern involving efficiency, or in the event of the proportions being changed, in which articles forming their equipments are issued, that the necessary steps are taken for providing for such changes.

On assuming
command.

7. Officers on assuming command, will cause the stores on charge to be verified, and will satisfy themselves that they agree in quantity with those charged in the ledgers.

Certificates to
be given by
outgoing and
incoming
officers.

8. The Officer assuming Command will forward to the General Officer Commanding, a certificate (in duplicate), signed by himself and the Officer giving over Command, or his representative, as to the state of the equipments. Should the actual stock not agree with the ledger charge, or should any discrepancies be found to exist, a report will be made through the General Officer Commanding to the Secretary of State, accompanied by a list, showing the articles surplus or deficient, as well as any explanations that can be given to account for the same. One copy of the certificate will be transmitted by the General Officer Commanding to the Secretary of State and the duplicate returned to the Officer assuming Command to accompany his annual equipment accounts. He will then be understood to have assumed the charge, and will be held personally responsible for any discrepancies which may subsequently be discovered. If an Officer on assuming the command should omit to furnish the prescribed certificates, he will thereby become responsible for his predecessor's charge.

Deficiencies in
equipments.

9. When deficiencies in equipments are discovered on a change of Command, the value of the articles deficient will be recovered from the Officer giving over the Command. Where any loss, injury, or deterioration of other than personal equipment, is clearly traceable to the neglect of a subordinate, the Commanding Officer who is liable may apply through the General Officer commanding to the Secretary of State to be relieved of the cost of replacing or repairing such stores. In the case of personal equipment the usual steps will be taken to recover the cost of replacing or repairing.

Boards to
consider dif-
ferences on
a charge

10. When a difference of opinion exists between Commanding Officers on a change of Command, or on the occasion of any transfer of equipments, as to the state, quantity, and description,

DUTIES OF OFFICERS.

SECT. I.

DUTIES OF OFFICERS COMMANDING ARTILLERY DISTRICTS AND CORPS—cont^d.

of the articles to be transferred, application will be made to the General Officer Commanding by either of the Officers between whom the difference exists, for the assembly of a Board to consider the matter.

changing hands.

11. In extensive commands, such as Royal Artillery Districts and in Garrisons, where a personal inspection of all the equipments, at the time of transfer, would be impracticable, Officers Commanding Artillery may base their certificates on reports rendered by the subordinate Officers in immediate charge of the several portions of the equipments; but they will nevertheless be held personally responsible for the general accuracy of the equipment accounts of the Command.

Provision for extensive commands.

12. In order to facilitate the maintenance of the equipment reserves, Officers Commanding Corps will at all times furnish the Ordnance Store Officers with such information as they may require, regarding the state of the equipments in their charge.

Information to Ordnance Store Department.

13. Officers Commanding will be held responsible for the safe custody of the copies of the Vocabulary of Stores which have been issued to them, and these books will be produced at Half-Yearly Inspections, and taken over on every transfer of command.

Vocabulary of Stores.

14. Officers Commanding Corps and Regimental Paymasters will communicate on subjects connected with equipment, directly with the Commissary General of the Ordnance Store Department at the station.

Correspondence with Ordnance Store Department.

15. Should there be any inconvenient delay in the supply of any articles of equipment, the Commanding Officer will bring the same to the notice of the General Officer Commanding.

Steps to be taken in the event of delay in supply.

SECTION II.—GENERAL SUPPLY OF EQUIPMENT.

I.—Estimates for Equipment.**II.—Requisitions for Equipment.****III.—Receipt and Inspection of Equipment.****IV.—Return of Equipment into Store.****V.—Boards of Survey and Courts of Inquiry.****VI.—Equipment Accounts and Claims against Corps.****I.—Estimates for Equipment.**

Annual estimates of corps.

Care in framing annual estimates.

Information in all store estimates.

Nomenclature.

Drawings.
Dimensions.

W.O. Form for annual estimates.
Artillery estimates.

Stores to be kept distinct in Artillery estimates.

16. All Officers to whom stores are supplied, will furnish annually, on the application of the Commissary General, estimates of their probable requirements for the ensuing year. These estimates will be prepared with the greatest care in order as far as possible to enable the Ordnance Store Department to anticipate the wants of the service.

17. All estimates will be made on the authorised forms, care being taken that the several columns are duly completed. They will show the cost of the stores estimated for, the data on which they are prepared, and the purposes for which the stores are required; they will also show the cost of any article proposed to be made by military tradesmen, or to be procured locally where there is no representative of the Ordnance Store Department; and they will contain references to any special applications and orders respecting the articles estimated for.

18. In describing stores, the prescribed nomenclature and sectional division of the Vocabularies issued by the War Office will be followed, and articles not included in the Vocabularies will be described by drawings or otherwise, in order to obviate the necessity of making further reference; in giving dimensions feet and inches are always to be expressed in words.

19. The annual estimates for all services, except the Royal Artillery, will be made out on W.O. Form 1455.

20. The annual estimates for artillery services will be prepared as follows, viz.:—stores required to keep up the proportions authorised for the armament of existing works, on W.O. Form 397; stores required for all services other than the armament of works, on W.O. Form 398.

21. Officers commanding the Royal Artillery, in preparing their annual estimates, will show in detail the positions of the pieces mounted in works; the number of rounds of ammunition for each piece in their charge; the number and nature of dismounted ordnance in charge, with the reasons why they are dismounted. A detail will likewise be supplied by the Officer commanding Royal Artillery to the Ordnance Store Officer, with the annual estimate, showing the numbers, nature, and descriptions of the

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

ESTIMATES FOR EQUIPMENT—cont^d.

guns, carriages, projectiles, and stores which it is proposed to paint during the following year; also all changes in the armaments, and in the proportions of ammunition held in Artillery charge, occurring since the last estimate, quoting the authority under which such changes have been made.

22. Officers commanding Artillery districts will make provision in their estimates, for gun ammunition for practice and exercise for the Artillery of the Auxiliary Forces, in their respective districts.

Ammunition for Auxiliary Artillery.

23. Additional guns or guns of different calibre, either for increasing or changing the armaments, will only be demanded, and their equipments estimated for, after the addition or alteration shall have been finally approved by the Secretary of State for War, and notified to Officers Commanding Royal Artillery.

Orders with regard to additional guns.

24. A separate estimate on W.O. Form 397 will be prepared by the Officer Commanding the Royal Artillery for all stores required for the armaments of new works. Armaments for new works will not be estimated for until the Officer Commanding the Royal Artillery at the station has received instructions to that effect.

Estimates for new works.

25. No estimates for Stores will be made on account of ordnance about to be withdrawn from the defences within the year for which the estimates are framed.

No estimates for articles that may not be required.

26. As a general rule, no annual estimates will be required for the supply of articles necessary to maintain the efficiency of the equipments of men and horses, or that of the equipments of the Field Artillery, Engineer Train, and Army Service Corps. Under these equipments will be included all small arms, accoutrements, small-arm ammunition, harness, saddlery, and other appointments supplied for men and horses, as well as tools and materials for their repair and preservation.

Services for which annual estimates are not required.

27. No stores required in excess of the regulated proportions, or of a description different from the authorised patterns, will be inserted in the estimates, unless previous sanction has been given for such supplies, and such entries must be supported by a reference to the authority in each case.

Estimates in excess of regulation.

II.—Requisitions for Equipment.

28. Officers Commanding Royal Artillery Districts, Regiments of Cavalry and Infantry, Batteries of Horse, Field, and Garrison Artillery, Troops and Companies of Engineers and of the Army Service Corps, as well as all other Officers who are direct accountants with the War Office for any portion of the service equipments, will put forward requisitions for munitions of war, stores, and materials to maintain the equipments for which they severally account, as well as for the training and service of their Corps generally. The requisitions will be prepared in duplicate on the approved forms, those for small arms and materials for their repair being kept separate from the requisitions for other

Requisitions to be made direct on Commissary General of Ordnance.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

REQUISITIONS FOR EQUIPMENT—cont^d.

articles; they will be sent direct to the Commissary General at the station by the Officer requiring the Stores, without reference to superior authority. Requisitions will be put forward on the dates specified in the following paragraph, in order that they may be properly examined before the issues take place.

All requisitions to be made quarterly.

29. With the exception of those for ammunition for practice and exercise, and for stores for troops under canvas, requisitions for Stores to maintain the Equipments will be made quarterly, on the 1st March, 1st June, 1st September, and 1st December in each year. Those of the 1st March will contain the demands for the annual supply of stable necessaries, materials for repair of arms, accoutrements, harness and saddlery, and for exchange of artificers' tools. Those of the 1st September will contain the demands for paint, &c. for the preservation of carriages and wagons. Ammunition for practice and exercise will be demanded yearly. Articles for veterinary purposes will be demanded half-yearly, on the 1st March and 1st September.

From Officers commanding detachments, who are non-accountants.

30. In the event of Officers Commanding detachments who are non-accountants, requiring articles of fixed equipment, they will prepare and forward the requisitions for the same to the Officers Commanding their respective Corps for signature, before sending them to the Ordnance Store Department. The issue will then be made and will be an issue to the Officer Commanding the Corps, a temporary receipt being taken by the Commissary from the Officer in Command of the detachment concerned, until the usual receipt and delivery vouchers have been passed between the Commissary and the head-quarters of the Corps accounting for the stores. Should the articles be urgently required, the Commissary will make the issue, and the Officer Commanding the detachment will be responsible for the Stores under the provisions of clause 56, Army Circulars 1872, until he has procured a covering requisition from his Commanding Officer, and the vouchers have been passed.

Proportions and nomenclature.

31. Officers making requisition for Stores will in all cases adhere to the proportions laid down by the regulations, and the prescribed nomenclature of the Vocabularies of Stores issued from time to time by the War Office, will invariably be used in describing the articles that may be required.

Intermediate requisitions objectionable.

32. Intermediate requisitions may in general be obviated, without inconvenience to the Service. To meet immediate and unforeseen requirements, spare articles of equipment are supplied. Where accoutrements are lost, as for example through desertion, or arms are damaged to such an extent that the armourer cannot repair them, the wants can be temporarily met by using the equipment of men who are for the time non-effective. There is no necessity for intermediate requisitions when a small quantity of ammunition, harness, or other articles suffer injury and require exchange.

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

REQUISITIONS FOR EQUIPMENT—cont^d.

- 33.** No articles will be issued from store on repayment, nor should any be so demanded. Such articles as are required to replace others lost or rendered unserviceable, ammunition for shooting matches, or other stores, the cost of which is to be recovered from the troops, will be demanded and accounted for in the same way as service equipments, and their value credited to the public in the manner laid down in paragraph 93. The purpose for which the articles are required will, however, invariably be stated in the column provided for remarks in the form of requisition.
- 34.** It is to be clearly understood by all Officers obtaining stores for maintaining the equipments, that the appropriation of the supplies to other purposes will not be sanctioned, without special approval.
- 35.** When stores have been reported as ready for issue, the troops will, if within a reasonable distance from the Dépôt, arrange for their conveyance.
- 36.** When troops are ordered to leave a station before the issues are made on requisitions that have been sent in, the Officer Commanding the Corps about to march, will prepare for the counter-signature of the Commissary General a list of the articles and the quantity of ammunition, that will not be drawn in that District, and this certified list will become the authority of the Officer Commanding to obtain the articles by requisition on the Ordnance Store Department at the station to which he is proceeding, the list alluded to being attached to the requisition.
- 37.** All requisitions connected with Armaments and Equipments will be made out on the prescribed forms, and rendered in duplicate to the Commissary General of the station. In the event of printed forms not being available, the requisition will be made out in manuscript in the same form.
- 38.** When the number of items required is large, the equipment forms with printed details will be used, but when few in number, the W.O. Form 1456 or 1457, as the case may be, will be sent in.
- 39.** The arms, accoutrements, and ammunition for Military Staff Clerks, Military Provosts or Police, and Serjeant Instructors of Gymnasia at the several stations and districts, will be demanded by and accounted for by an Officer of the Adjutant-General's department. Equipment for Staff Clerks in Royal Engineer Offices will, however, be accounted for by Commanding Royal Engineers, since those Officers also account for the equipments of Military Foremen of Works.
- 40.** When a Staff Clerk moves from one station to another, he will take his sword and belt with him, care being taken that proper vouchers of receipt and delivery are sent by the accountant to the station to which the Staff Clerk is proceeding. In the event of the arms and accoutrements being surplus in

Issues on repayment.
Replacing Stores lost.
Ammunition for Shooting Matches.

Misappropriation of stores.

Troops to draw their own stores.

Notice to Ordnance Store Officer when troops leave a District.

Requisitions to be made upon established forms.

In cases of necessity in manuscript.

Special forms to be used when the number of items is small.

Appointments of Staff Clerks, &c.

The same, on change of station.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

REQUISITIONS FOR EQUIPMENT—cont^d.

consequence of a Staff Clerk becoming non-effective, they will be returned to the nearest Ordnance Store Depôt.

III.—Receipt and Inspection of Equipments.

Inspection of stores on receipt by the Troops.

41. All equipments, when received by the troops, will be at once examined, the packages opened, and the contents counted, in presence of the Officer Commanding the Corps, or an Officer deputed by him. This examination will be made before the equipments are taken on charge.

Those in charge to attend inspections.
Two Officers to be present.

42. When equipments of any kind are under inspection, the presence of the Officer responsible for them, or of an Officer duly deputed by the responsible Officer, is required; and no inspections will be allowed to take place in the presence of less than two Officers.

Objections to equipment.

43. All objections to equipment on the ground of being of inferior quality, of an obsolete or incorrect pattern, or for any other cause, will if possible be made by Officers Commanding Corps before the articles are taken in charge; but it must be understood that if the articles are serviceable, they are not to be objected to on account of their being part worn. When the store vouchers have been passed, the responsibility devolves on Commanding Officers.

Inquiry as to loss, damage, &c. to supplies.

44. Should any deficiencies be discovered, or any articles be found damaged or unsuitable, the Officer Commanding the Corps will take steps to ascertain the cause of damage, loss, or unsuitability, and report the result to the Ordnance Store Officer, for the information of the General Officer Commanding, who, if not satisfied, will order a Court of Inquiry to investigate the case.

Ammunition and combustible stores to be taken on charge according to marks on the packages.

45. Fuzes, tubes, and other articles issued in hermetically closed cases, as well as small-arm ammunition and gunpowder, will be taken on charge as received, and the exact numbers or quantities checked when the articles are required for use. Any existing defects will then be reported without delay, and all names, dates, or other marks upon the cases accurately quoted.

Inspection of stores on receipt from carriers.

46. On all occasions of stores being received, the Officers or others receiving them, before any receipt is given to the carrier, will ascertain whether the packages have been damaged in transit either by wet, or by being opened, or in any other way. Should such be the case, or should any suspicion arise as to their having been tampered with, the circumstance will be at once pointed out to the person conveying the stores, and the packages will be opened, if requisite, in his presence; a note will always be made on the bill of lading, or way bill, of the circumstance, since in the absence of any remarks, no claim could be made against the carrier, and the Officer receiving the stores would make himself responsible.

Stores to be counted and weighed.

47. Stores received by number and weight will be carefully counted and weighed, in order to ascertain whether they are

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

INSPECTION OF EQUIPMENTS—cont^d.

correct in both respects, and when stores are packed in cases or bales the packages will be weighed, and the weight marked upon each.

48. All persons receiving stores, will take care on receipt of bales, cases, or packages to ascertain the actual weight before opening them, and see that it agrees with the weight marked upon them. Should this not be the case, they will have each package opened by itself, and the contents compared with the packing notes contained therein. If the contents are correct, all stores of the same kind will be collected together, and the packing notes will be kept until the articles delivered are compared with the voucher. If any package be without a packing paper, or if the contents do not agree with the packing paper, they will be at once weighed, together with the package itself and all wrappers. Should the weight then ascertained be less than that of the package before being opened, any deficiency existing will be thus proved against the corps receiving the stores. On the other hand, should the weights agree, the deficiency must have occurred at the supply station before the package was made up. In all cases of irregularity a report will be made without delay to the Commissary General, under whose authority the stores were supplied, the contents being kept separate, and the packages or wrappers retained for further inquiry.

Care to be taken on receipt to see that the weight is correct, and that the contents agree with the marks and invoice.

49. No equipments will be transferred from the charge of one Corps to another, except by proper authority, and when a transfer takes place an Ordnance Store Officer will, if possible, be present. No articles will be received from, or delivered into store, without the receiving and delivering Officers making a careful inspection of all such stores, either personally or by deputy.

Inspection of stores changing hands.

50. In order to insure that the ordnance, carriages, platforms, and ammunition in charge of the Artillery, are kept in a thorough state of efficiency, Officers Commanding the Royal Artillery will make an inspection of the same, at least once in six months. Gunpowder, projectiles, fuzes, and laboratory stores will be minutely examined, and when necessary, will be subjected to proof.

Half-yearly inspection of armaments.

IV.—Return of Equipment into Store.

51. Articles of equipment will not be returned into store for the purpose of being replaced until they have become thoroughly unserviceable. They will not be so returned on the ground that they are of an obsolete pattern, even if they have been in use for the prescribed time, without the authority of the Secretary of State.

Articles not to be exchanged until they are quite unserviceable, and not in consequence of their being obsolete.

52. Whenever it becomes necessary or advisable to return equipments into store, Officers Commanding Corps will make application to the Ordnance Store Department to receive them, stating their description, number, and the time they have been in use. See further paragraph 67.

Authority to return equipment.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

RETURN OF EQUIPMENT INTO STORE—cont^d.

Posting equip-
ment ledgers.

53. All articles accounted for in the equipment ledgers, are presumed to be in a serviceable condition; such equipments as may become unserviceable will, therefore, be returned into store periodically and struck off charge.

Certificate to
accompany
returned un-
serviceable
equipments.

54. Officers Commanding Corps, when returning equipments, will merely insert the total numbers in the column headed "Number or Quantity" of the delivery voucher, leaving the columns which are descriptive of condition, to be filled in by the Officers of the Ordnance Store Department.

Officers Com-
manding Corps
to make
arrangements
and to convey
stores to the
Depôts.

55. Officers Commanding Corps will make their own arrangements as in the case of issues (*see* paragraph 35), for the return of unserviceable and surplus equipments into store in Camp and Garrison.

Receipts for
returned
stores.

56. A receipt showing the description, and number or quantity, of all returned stores will be taken from the Commissary receiving the stores, by the Officer who hands them over. This receipt will be for quantity only, without reference to condition, which will be determined by the Ordnance Store Department under the provisions contained in the following paragraph.

Articles impro-
perly returned.

57. Whenever articles returned into store as unserviceable, are considered by the Commissary receiving them to be still serviceable, or capable of repair by the regimental artificers, or if any of those that are really unserviceable, are considered to have become so from improper use or negligence, or if articles returned as serviceable are found on examination to have been injured while in possession of the troops, who thereby render themselves liable to pay the cost of repair, the Commissary General will call the attention of the Officer returning the articles to the subject, in order that the damages may be made good, or an explanation afforded, for the information of the General Officer Commanding, who, if necessary, will order a Board of Officers to investigate the matter.

Return of
surplus equip-
ment.

58. Officers commanding Districts, Garrisons, and Corps, who may, in consequence of an authorised reduction of establishment or armament, or from other causes, have in possession surplus equipment, or any stores which are not likely to be again required within a reasonable period, will make application to the Ordnance Store Department for the return of such articles into store.

Return of
stores by out-
going corps.

59. When Officers Commanding Corps previous to marching from a station, obtain authority to return stores of a bulky nature, in order to avoid the cost of carriage, they will apply to the Commissary receiving them, for a certificate of their quantity and condition. This certificate will enable them, on the Corps reaching its destination, to draw from the Ordnance Store Department, an equivalent supply, if necessary.

Certificate of
Commissary.

No Store
Depôt.

60. When it may not be advisable to return these stores, as for example, should there be no store depôt at the station to which the Corps is proceeding, whence a fresh supply could

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

RETURN OF EQUIPMENT INTO STORE—cont^d.

be obtained, they will accompany the Corps, and public conveyances will be provided (*see* paragraph 101).

61. All equipments issued to the service to meet the purely local requirements of a station, will be returned to store by outgoing Corps, unless they are ordered to be handed over to the incoming Corps.

Return of stores locally used.

62. Previous to the departure of troops from a station, the small-arm ammunition in charge, whether service or practice ammunition, will, with the exception of a sufficient quantity to provide the guards and escorts with 20 rounds for each man, be returned into store, or if no store depôt exists at the station, it will be handed over to an Officer of the Ordnance Store Department deputed to receive it, care being taken that the service and practice ammunition are shown separately on the delivery voucher. The Officer who gives over the ammunition will be furnished with a proper receipt, which will be sufficient authority for the corps to draw a similar quantity at the new station. The ammunition given into store will be available for re-issue to other corps, and cannot be objected to on account of having been in men's pouches, as it is expected that all ammunition given up by troops leaving a station will be in perfectly good condition. Should any defects be found to exist, the Officer who has had it in his charge will be called upon for an explanation.

Return of small-arm ammunition by troops on change of station.

63. The utmost vigilance is required on the part of Officers returning stores, in order to guard against combustible stores being returned into ordinary store depôts, instead of into the magazines, as well as to preclude the possibility of lucifer matches being left among stores of any kind.

Combustible stores and lucifer matches, precautions against.

64. Filled cartridges and filled shells are always to be emptied by the Royal Artillery prior to being given into store, the Ordnance Store Department providing any packages that may be required to receive the gunpowder.

Prohibition against filled cartridges and filled shells being returned into store.

65. Commanding Officers are responsible that all empty chests, cases, barrels, and cylinders, received with equipment of any kind, are handed over (as soon as they can be dispensed with) to the Ordnance Store Department; and, if possible, without cost to the public.

Return of empty cases and packages.

66. All empty ammunition or powder barrels, or packages, will be most carefully examined to see that they are free from iron tacks in the head, and grit and dirt on the staves, before being returned into store.

Empty ammunition packages to be examined.

67. When stores are returned from a distance, the Officers returning them will invariably send, by post, to the Commissary General at the station which is to receive them, receipt and delivery vouchers carefully drawn up on W.O. Form 1220. They will be sent on the same day that the goods are despatched. (*See* paragraph 52.)

Delivery and receipt vouchers always to be sent by post.

68. The date and number of the order directing the return of the stores will be accurately inserted in the headings of both

Date and order always to be inserted.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

RETURN OF EQUIPMENT INTO STORE—cont^d.

vouchers, and a corresponding date and number will be conspicuously marked on the outside of each case or package, so as to enable the consignee to identify them immediately on receipt.

Vouchers to contain details.

69. A detailed list of every article returned, with the numbers, will be entered in the usual manner in the delivery and receipt vouchers, and a memorandum entered at the foot of the detailed list, on the delivery voucher, specifying the date on which the articles were despatched, the name or designation of the carrier, and mode of transit.

Vouchers to be signed.

70. The delivery voucher will be signed by the consignor, and the receipt voucher, duly signed by the consignee, will be returned as soon as practicable after the stores have been received.

Carrier's note to accompany the stores.

71. When stores are returned by carrier, a carrier's note (W.O. Form 1223), detailing the number, description, and weight of packages, bundles, and loose articles, and the number of articles contained in each bundle, will be delivered to the carrier.

Convoy notes to be given to the Officer commanding convoy.

72. When stores are forwarded by Convoy or under Escort, Convoy notes (W.O. Form 1091) will be delivered to the Officer commanding the Convoy or Escort, or to the Conductor, and the following course will be observed :—

Conductors and Officer of escort to give receipts.

a. The Officer in command of the escort or the Conductor will satisfy himself that the stores agree with the account given to him, in order that there may not be any subsequent questions as to the correctness of the convoy notes, or bills of delivery, three of which will be filled up. These will be signed by the Officer despatching the Stores, and a receipt taken from the Conductor or Officer commanding the escort. One will be retained by the Consignor, and the other two will be carried by the Conductor or Officer commanding the escort to the Consignee. One of these will be receipted, and returned to the Conductor or escort, and the other kept by the Consignee. The day and hour of departure will be inserted upon the convoy notes by the Consignor, who will forward the proper receipt voucher for the signature of the Consignee. In forwarding ammunition, it will always be kept separate from other Stores (see paragraphs 176–189).

Convoy notes, &c., for stores delivered into store.

b. When Stores are received from a Regiment or Corps, the Commissary will demand from the Officer in charge of the escort, or the Conductor, the convoy notes, or other delivery vouchers, and having found the articles to be correct, he will return one copy receipted to the Officer or Conductor, forwarding the usual receipts to the Consignor as soon as possible. Should, however, the regular delivery vouchers not be forthcoming, the Stores will nevertheless be received; the Commissary reporting the omission to the Consignor, to whom he should at the same time forward a receipt for the Stores actually received.

Deficiency or loss of stores.

c. When the Stores do not agree with the convoy notes, the Commissary will inquire into the cause of disagree-

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

RETURN OF EQUIPMENT INTO STORE—cont^d.

ment. If it appear to arise from negligence or fraud, such measures will be taken, as may be requisite, in order that the offender may not escape punishment. If it appear to arise from just and fair causes, as, for example, the death of cattle on the road, or other unavoidable accident, the Commissary will obtain a certificate of any such deficiency, damage, or loss, before the Officer in command of the military escort or the Conductor can be discharged. Should a court of inquiry be necessary, the Commissary-General will apply for one to the General Officer Commanding.

73. Regiments and corps will be held responsible that at least 90 per cent. of the cases of ball cartridges issued annually for practice are delivered into store. An allowance for their collection will be granted under clauses 73 and 187, Army Circulars, 1870, and clause 18, Army Circulars, 1875.

Return of cartridge cases.

V.—Boards of Survey and Courts of Inquiry.

74. The Officer Commanding the Royal Artillery, the Commanding Royal Engineer, and the Commissary General at a station will, once a year, or oftener if necessary, make a joint inspection of the works, magazines, stores, workshops, &c., of all their departments, not as a Board or with any view to a joint report, but in order that an opportunity may thus be afforded to each Officer of calling special attention on the spot to his requirements.

Officer Commanding Royal Artillery, Commanding Royal Engineer, and Commissary General, to make joint inspections. Record to be kept.

75. Minutes recording these inspections, and any action taken in consequence thereof, will be entered in a book to be kept for that purpose by each Officer.

76. The employment of Regimental Boards of Survey for the condemnation of stores considered to be unfit for service, or for the examination of stores when received by the troops, is unauthorised. Commanding Officers can assemble such Boards to assist them in judging of the propriety of reporting whether any portion of their equipments is unserviceable; but the proceedings cannot be put forward in support of requisitions on the Ordnance Store Department for articles required from store. Condemnations of stores must be supported by the proceedings of Garrison Boards, where boards are requisite.

Regimental Boards.

77. When stores or equipment of any kind are lost, destroyed, or injured, and it is a matter for consideration on whom the expense of repairing or replacing them should fall, the Officer Commanding the Regiment or Corps concerned will bring the circumstance to the notice of the General Officer Commanding, through the Adjutant General.

Investigation of loss of equipment.

78. Should the General Officer Commanding decide that the loss has arisen from a breach of discipline involving trial by Court Martial, then a copy of the sentence of the court, when approved by the General Officer Commanding, will be the authority upon which the Officer Commanding will act, either by demanding articles to replace those lost, or else by requesting permission to

By Court Martial.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

BOARDS OF SURVEY AND COURTS OF INQUIRY—cont^d.

have them repaired when his own artificers cannot execute the work. In either case the copy of the approved sentence will be attached to the requisition on the Ordnance Store Department.

By Court of Inquiry.

79. In the event, however, of any loss, destruction, or damage occurring which might lead to the possibility of a charge being made against the public, but which does not involve a trial by Court Martial, the matter will be investigated and reported upon by a Court of Inquiry. Such court will be convened on the order of the General Officer Commanding, at the instance of the Officer Commanding the Regiment or Corps, through the Adjutant General's Department, and will be composed, if practicable, of Officers not belonging to the Corps interested. If there be an Ordnance Store Officer on the spot, not locally the head of the Department, he will serve as a member of the Court.

Officers ordered from other stations.

80. The General Officer Commanding, having regard to expense, will use his discretion in ordering officers from other stations to serve on Courts of Inquiry.

Proceedings of Court of Inquiry.

81. The proceedings of the Court of Inquiry will be transmitted in duplicate by the President direct to the Commissary General, who will take the orders of the General Officer Commanding thereon, and send one copy to the Officer of the Corps concerned, to serve as his authority to strike the articles off charge, or to obtain others in exchange. In the latter case the Officer Commanding will attach the proceedings to his requisition.

82. The Commissary General will send the duplicate copy to the Secretary of State direct, unless the articles require to be replaced, when he will transmit it to the Commissary General, Royal Arsenal, Woolwich. The proceedings will invariably be quoted on the voucher transmitted with the equipment ledger in support of the transaction.

Arms and Ammunition lost or damaged.

83. The loss or damage of Arms or Ammunition, being a matter of discipline, will always become the subject of investigation before a Court Martial or a Court of Inquiry.

Surveys on equipments of Troops proceeding to or returning from India.

84. Surveys on the Equipment of Regiments or Corps proceeding to or returning from India, will be held by Officers acting on behalf of the Secretary of State for War and the Secretary of State for India respectively. Instructions as to the mode in which the surveys will be carried out will be found in Appendix I.

VI.—Equipment Accounts and Claims against Corps.

Duty of Officers to account.

85. It is the duty of every Officer receiving any equipment, or money for the purchase of equipment, ammunition, or materials for repairs, to keep and render accurate accounts thereof, and until these accounts have been examined and allowed, he will not cease to be responsible. He will therefore be careful to obtain receipts, on the proper W.O. Forms, for all articles leaving his charge.

GENERAL SUPPLY OF EQUIPMENT.

SECT. II.

EQUIPMENT ACCOUNTS AND CLAIMS AGAINST CORPS—contd.

86. Officers Commanding Corps will record in an Equipment Ledger (see Appendix XVIII.) all transactions connected with the ammunition and stores forming the equipments of their Corps.

Regimental Equipment Ledgers.

87. Officers Commanding Artillery Districts will similarly render District Accounts balanced up to the 31st March in each year. Detailed Instructions as to the mode in which these accounts are to be kept, and rendered, will be found printed in Appendix III. Officers commanding Artillery districts will have the balances of the subsidiary ledgers in their districts duly verified from time to time by comparison with the actual stock of stores, and will report the result to the War Office when there are any surpluses or deficiencies. This duty will be done gradually, in such a manner as that the whole of the sub-accounts of a district may be verified once in three years.

Artillery District Equipment Accounts.

88. Regimental Equipment Ledgers will be balanced up to the 31st December in each year, and at home stations, will be forwarded within one month from that date, with the vouchers in support, to the Commissary General, Royal Arsenal, Woolwich. At foreign stations they will be transmitted through the Commissary General of Ordnance at the station. Instructions as to the mode of accounting for the equipments are given in Appendix II.

Regimental Equipment Ledgers to be balanced and forwarded at close of each year.

89. All articles supplied to the Staff, and not accounted for in the Equipment Ledger, whether a local and temporary supply, or of a permanent nature, such as boats and waterproof clothing, will be held on inventory, and accounted for to the Commissariat Department.

Articles locally accounted for.

90. On a Regiment or Corps being reduced, or a Depôt joining a Brigade Depôt, or on embarkation for India, the Equipment Ledger will be balanced.

Balance of ledgers under exceptional circumstances.

91. Officers Commanding Depôts attached to Regiments not their own will account for the equipment of their respective Depôts, and will render separate Equipment Ledgers. The equipment of the Depôt companies of a regiment will continue to be accounted for in the Regimental Ledger until the Depôt is detached.

Equipment accounts of Depôts.

92. On a Depôt joining its Brigade Depôt the Equipment Ledger for the period from 1st January to the date of joining, will be closed. The Officer Commanding will hand over the Depôt Equipment to the Officer Commanding the Brigade Depôt, and take the receipt of the latter for the same. The items shown in such receipt will be struck off charge in the Depôt ledger, which will then be closed and rendered complete, with vouchers in support.

The same, when the Depôt joins its Brigade Depôt.

93. A soldier who by neglect or mismanagement loses, or renders unserviceable, any article of his equipment, will be charged the full estimated value of the article as specified in the Woolwich Vocabulary. The Articles will then be struck off

Charges against soldiers for loss or destruction of equipment.

SECT. II.

GENERAL SUPPLY OF EQUIPMENT.

EQUIPMENT ACCOUNTS AND CLAIMS AGAINST CORPS—cont^d.

charge by an expense voucher (W.O. Form 485), which will show the amount credited in detail, as well as the period of the Regimental Pay List in which the money has been credited, and the number of the Pay List voucher. When Stores are issued to replace losses, a copy of the delivery voucher will be passed by the Commissary to the Paymaster, who will append it as a voucher to the Pay List. (See paragraph 33.)

Charge for damages.

94. Damage to equipment occasioned either wilfully or by negligence, will be charged for according to the extent of such damage, and if the repairs necessary to the damaged arms or equipments are effected by regimental artificers, the cost of such artificers' time will be added to that of the material expended.

Authority for charges on account of equipment.

95. The authority of the Commissary General will be sufficient to the Paymasters of Regiments, for any charges in their Pay Lists on account of Equipment.

Care to be taken to return all camp equipment into store, and to balance the ledger.

96. With regard to camp equipage which, in time of peace, is only issued under special circumstances, or in standing camps, Commanding Officers will be careful, prior to leaving the camp, or at the termination of the service, to see that all the articles taken on charge are duly accounted for in the ledger, as either returned into store or deficient. Any deficiency will be charged against the Regiment.

Veterinary stores and instruments.

97. The veterinary stores alluded to in paragraph 271 will be accounted for in the Equipment ledgers, but veterinary instruments, apparatus, medicines, and surgical means, will be accounted for to the Principal Veterinary Surgeon to the Forces.

Contents of Artillery District Accounts.

98. The Store Accounts of Royal Artillery Districts will be confined to the articles connected with the armament of works, (including pivots and racers when handed over by the Royal Engineer Department), and to those supplied for the drill of the Royal and Auxiliary Artillery. Materials for repair, articles for cleaning and lubricating purposes, paint, and drill stores, will be accounted for on a separate ledger from the general District accounts.

Barrack stores to be held on inventory.

99. Brooms, brushes, hoes, scythes, spades, shovels, pickaxes, and other like stores, forming no portion of the service equipments, will be accounted for upon Inventory as barrack stores.

Lithographs how accounted for.

100. Lithographs supplied to Officers Commanding Royal Artillery Districts, will be accounted for in the District Ledgers. Those for the Instructors in Gunnery will be brought on charge in the Brigade Equipment Ledgers.

Charge for conveyance of Stores.

101. Any charge in the regimental accounts for conveyance of stores from one station to another, must be supported by a list of the stores, and a certificate from an officer of the Commissariat and Transport Department, that the means of transport could not be provided.

SECTION III.—ARTILLERY EQUIPMENT.

I.—Equipment for Garrison Service.

II.—Equipment of Batteries for Field, Siege, and Mountain Service.

I.—Equipment for Garrison Service.

102. The armaments of works of defence are determined by the Secretary of State, in communication with the Commander-in-Chief; and no changes affecting them will be made, except in cases of emergency, when the General Officer Commanding may take such measures, as the necessities of the Service demand, reporting his proceedings to the Secretary of State for War.

103. The Surveyor-General of the Ordnance being charged with the duties relating to the provision and supply of Artillery Matériel, all reports and returns connected therewith from Officers Commanding the Royal Artillery and others, will in future be addressed to the Director of Artillery and Stores, for submission to the Surveyor-General. The following returns will be rendered accordingly :—

Armaments fixed by Secretary of State.

Reports and returns relating to Artillery Matériel.

	W.O. Form.	When rendered.
<i>Annual.</i>		
Return of field and mounted } garrison ordnance -	13a	} 1st April.
Return of ordnance and stores in charge of { dismounted ordnance -	M.S.	
Return of ordnance and stores in charge of { Royal Artillery -	14	} 1st June.*
Ordnance Store Department -	1,236	
Return of iron ordnance - { Cast - -	1,475	} 1st November.
Wrought - -	1,476	
Return of field ordnance equipped - { S. B. - -	287a	} 1st November.
R. - -	288a	
Return of armaments in detail, special War Office Form 610 (see para. 108) - - -	M.S.	1st January.
<i>Half-yearly.</i>		
Return of Artillery Volunteers -	1,640a	} 1st April and 1st October.
Return of gunpowder in charge -	1,259	
Return of gunpowder expended -	1,262	
<i>Monthly.</i>		
Detail of changes in armaments -	104a	1st of each month.
Detail of changes in guns and stores in possession of Auxiliary Artillery }	M.S.	1st of each month.

* Returns from Nova Scotia will be furnished on the 1st November.

SECT. III.

ARTILLERY EQUIPMENT.

EQUIPMENT FOR GARRISON SERVICE—cont^d.

Duplicate copies to be sent to D.A.G., R.A.

104. Duplicate copies of the before-named returns marked *a*. will be transmitted under cover to the Deputy Adjutant-General, Royal Artillery.

Returns of Field Ordnance equipped.

105. When any deficiencies are noted upon the Annual Returns of Rifled and Smooth-bore Field Ordnance Equipped the Officer Commanding the Royal Artillery, instead of forwarding the Returns to the War Office direct, will transmit them through the Commissary General, in order that that Officer may show therein the steps that have been taken to supply the Equipments required to complete the Batteries.

Ordnance in charge of Royal Artillery and Ordnance Store Department.

106. All ordnance mounted on the defences, as well as all dismounted ordnance lying within the precincts of the batteries for which the Commanding Officer of Artillery is responsible, and all magazines containing any gunpowder in charge of the Artillery, will be in charge of the Royal Artillery. All other ordnance and gunpowder will be in charge of the Ordnance Store Department.

Artillery charge, distribution of.

107. The distribution of the equipment given in charge to the Royal Artillery, among the various batteries and divisions of the defences, will be made according to local circumstances, at the discretion of the Officer Commanding the Royal Artillery.

Rules to be observed in order to avoid divided responsibility.

108. The proportions given in Part 2, (Garrison Service) provide for the complete equipment of the several classes of ordnance as well as for magazines, shell rooms, and laboratories; and in order that there may be no divided responsibility between the Royal Artillery and the Ordnance Store Department as to the maintenance of these proportions, the following rules will be observed :—

a. The Officer Commanding Royal Artillery will draw up a statement on special War Office Form 610, showing in detail the authorised armaments in his district, with the full proportions of carriages, side-arms, ammunition, and all stores to be maintained for each and every fort. But as in many cases the full proportions cannot be conveniently kept in possession of the Royal Artillery, the statement will be prepared after consultation with the Commissary General of the Station, to show separately the quantities to be held by the Royal Artillery and Ordnance Store Department respectively, according to circumstances, the total of the two not exceeding the full proportions allowed. It is to be understood that these equipments, whether in charge of the Royal Artillery or the Ordnance Store Department, are independent of any reserves which it may be considered expedient to maintain at the station in charge of the Ordnance Store Department.

b. The statement will be prepared in triplicate, and will receive the approval of the General Officer Commanding.

ARTILLERY EQUIPMENT.

SECT. III.

EQUIPMENT FOR GARRISON SERVICE—cont^d.

One copy will remain with the Officer Commanding the Royal Artillery, another with the Commissary General, and the third will be forwarded by the General Officer Commanding to the Secretary of State for War.

c. The Officer Commanding the Royal Artillery and the Commissary General will be held responsible that the proportions to be kept up by each are duly maintained, and that all expenditure and exchanges are provided for in their respective estimates. All surplus or obsolete stores in forts or batteries should be returned to the Ordnance Store Department.

109. The word "district" throughout the detailed tables of proportions will be understood to mean the extent of an Artillery command in the United Kingdom or that of a station abroad. Districts and stations, when of considerable extent, are divided into two or more sub-districts, for which stores may be demanded on the scale allowed for districts.

Definition of the word "district."

110. The number of filled cannon cartridges to be maintained in the Royal Artillery charge in time of peace will not exceed the following proportions:—

Filled cannon cartridges and shells.

a. For M.L.R. guns of 7-inch calibre and upwards—

Abroad.

At home.

100 rounds a gun.

75 rounds a gun.

to correspond with the number of cylinders allowed.

b. For 80-prs., for 7-in. B.L.R., and for lighter natures 10 rounds for each gun mounted. All shells within the above proportions are to be kept filled where circumstances enable them to be stored in proper security; all filled shells are to be marked "*Filled.*"

c. At forts where the expense magazines are contiguous to other buildings, the proportion is not to exceed two rounds a gun, provided that empty cartridges, cylinders to hold them, and all means for filling them are on the spot, and that the powder is stored at a convenient distance.

111. If under exceptional circumstances Officers Commanding should wish to exceed the foregoing proportions the Secretary of States authority will be applied for.

112. War rockets will not form any portion of the equipment of fortresses; they will only be employed with siege trains and in the field, as occasions and circumstances demand (*see* para. 175).

War rockets.

113. Special stores for landing, mounting, and dismounting heavy guns are supplied in accordance with lists published from time to time by the War Office.

Special stores for landing, mounting, &c., guns.

SECT. III.

ARTILLERY EQUIPMENT.

EQUIPMENT FOR GARRISON SERVICE—cont^d.

General Supplies to batteries.

114. Articles, of which the application is general and irrespective of the nature of ordnance, such as claw-hammers, portfire clippers, spanners, linstocks, &c., and which are supplied in certain proportions to each battery, will be demanded in the same amount, whether the armament of a battery comprises one or several classes of ordnance. In preparing requisitions for this class of stores, the local signification of the word "battery" must sometimes be departed from, and the entire armament of an enclosed fort, or of a portion of a line of defence, not too extensive for the convenient use of the stores, will be treated in all respects as though the pieces formed a single battery.

Signification of the word "battery."

Not governed by nature of ordnance.

115. Articles, of which the application is general and irrespective of the nature of ordnance, but which are supplied in proportion to the number of pieces, will be demanded on the general aggregate of the ordnance in the district for which the demand is made, without regard to the nature of the ordnance.

Certain supplies by districts or stations.

116. Certain articles, such as heavy drag ropes, knock-up wrenches, transporting axle-trees, drug carriages, &c., of which the use is more or less general, and of which the number required is small, are supplied in a certain proportion for each district or station.

Supply of fuzes, tubes, and laboratory stores.

117. In demanding fuzes, tubes, primers, and other laboratory stores supplied in sealed cylinders, the numbers given in the details of equipment will be adhered to as closely as possible; but, in order to avoid the deterioration caused by unsealing cylinders for the issue of fractional parts of their contents, these numbers may be increased by the excess contained in one cylinder. All cylinders will therefore be issued full.

Cylinders not to be opened until it is absolutely necessary.

118. Upon no account are cylinders containing the articles enumerated in paragraph 117, to be opened unless their contents are required for immediate use, or for inspection.

Hydraulic buffers.

119. In all cases where guns are mounted on carriages and platforms fitted for hydraulic buffers, the buffer will invariably be kept on the platform filled with the proper quantity of oil; and when not required for immediate use the piston will be disconnected from the carriage and pressed home into the cylinder.

Commanding Royal Engineers to notify to Officers Commanding R.A. when the platforms will be required.

120. As it has been decided that racers for heavy gun platforms shall not be fixed until the platforms can be put on them, Officers Commanding Royal Artillery, on being informed by the Commanding Royal Engineer, of the dates by which it is desirable that the platforms should be on the spot, will make the necessary arrangements to avoid delay.

Nomenclature of Artillery magazines and stores.

121. The nomenclature of the several parts of the Magazines and Store Rooms in charge of the Artillery, together with a description of the purposes for which they are intended, is given in Appendix IV.

ARTILLERY EQUIPMENT.

SECT. III.

EQUIPMENT FOR GARRISON SERVICE—cont^d.

122. Instructions with regard to magazines, ammunition stores laboratories, and the use of lamps in the same, are given in Appendix V.

Instructions in regard to magazines and laboratories.

123. The weights to be borne by and the description of stores used with triangle gyns, sling carts, and wagons, and the splay allowed for the pry-pole of iron gyns of 18 feet will be found in Appendix VI.

Weights to be borne by triangle gyns, sling carts, and wagons, and splay of pry-pole of iron gyns.

II.—Equipment of Batteries, Field, Siege, and Mountain Service.

124. General details of the establishment of Batteries of the Royal Horse and Field Artillery, as well as for Mountain Service, are shown at pages 81-83; and of Gun and Small-Arm Ammunition Reserves at page 84; and of Siege Guns and Carriages at page 85.

Field and Siege Artillery.

125. The War establishment of carriages for Batteries of Royal Horse and Field Artillery, includes the under-mentioned stores for intrenching and encamping, viz. :—

Field service equipments include all requirements for encamping.

Axes, felling and pick.
Hooks, bill and reaping.
Kettles, camp, Flanders.
Lanterns, brass, globular.
Mauls, common.

Posts and ropes, picket.
Shovels and spades.
Tents, circular (with poles, pins, mallets, pin bags and valises).

126. These Batteries, when reduced to the Peace establishment, are, however, not supplied with the full proportions of such stores.

Not so equipped in time of peace.

127. Batteries of position and heavy field batteries do not on service carry their own tents, nor (except the heavy field batteries) their supply of picketing implements. Transport, other than that available in the batteries, must be procured for the conveyance of these stores.

Batteries of position do not carry camp equipment.

128. The establishment of Batteries armed with 20-pr. and 40-pr. rifled guns does not include a fixed detail of harness and saddlery, since the mode of draught employed for them is liable to vary. These batteries might, according to circumstances, be drawn either by field artillery horses with service equipment, or by country horses with cart harness, procured where the forces are operating. The latter mode of draught will, as a rule, be adopted for 40-pr. batteries serving at home; these batteries having been specially fitted for draught with farmers' harness.

Harness and Saddlery for 20-pr. and 40-pr. batteries.

129. One common shell will be carried empty in each gun limber of batteries of Horse and Field Artillery for drill purposes, in time of peace.

Shell for drill purposes.

SECTION IV.—ENGINEER EQUIPMENT.

Field and Siege Service.

Field equip-
ments and Siege
requirements
of Royal En-
gineers.

130. The purposes for which the three descriptions of troops of the Royal Engineers are constituted are shown at page 86. The details of the Royal Engineer siege requirements would be dependent upon the nature of the ground, on the maximum strength of the working parties to be employed, and partially upon the number of the guns employed.

Wagons with
camp equip-
ment.

131. The War Establishment of wagons for the Royal Engineer Train includes the stores for camp equipment detailed in paragraph 125.

SECTION V.—ARMS AND ACCOUTREMENTS.

132. The arms and accoutrements supplied by the War Department to the regular forces consist of the articles, detailed for the respective services, at pages 88–93. Details of.

133. Extra arms and accoutrements, except havresacks and water bottles, will be supplied in excess of the regulated establishments to Infantry Regiments and Brigade Depôts temporarily augmented in strength. Extra service arms and accoutrements required for Depôts will be issued to the Regiments to which they are attached. Arms so issued, being especially marked, will not be taken abroad if supplied at home, and if supplied at foreign stations they will be returned into store before a regiment leaves the station. They will be shown in returns as “Extra Service” arms, and will be given into store, when the Regiment or Brigade Depôt is reduced to its proper establishment. Supply of
“extra service”
arms.

134. When Martini-Henry rifles are supplied to Rifle regiments, a butt swivel will be issued for each arm, to be screwed in by the armourer serjeant. Butt-swivels
for Martini-
Henry rifles.

135. When Depôts join the Brigade Depôt, they will take their equipments with them. No arms, accoutrements, or equipment of any kind will be transferred with non-commissioned officers or men from the Brigade Depôt. Depôts, and
Brigade Depôts,
transfer of
equipments.

136. When unarmed drafts embark to join Regiments abroad, stationed elsewhere than in India, the Commissary General at the port of embarkation will issue to the Officer Commanding, for their exercise during the voyage, second class (or if these are not available, first class) arms and accoutrements in the proportion of 10 per cent. of the strength, together with 60 rounds of service ammunition per rifle for use in case of emergency, one pair of handcuffs for every 100 men, and one bugle or drum. The accoutrements will consist of a waist-belt and frog, and a 20-round pouch. Drafts to be
supplied with
arms and
accoutrements
for exercise
during voyage.

137. On the delivery of waist-belts into store as surplus or unserviceable, the union lockets, if attached by means of thongs, will, if serviceable, be removed from the belts, and retained on regimental charge to meet future requirements; if, however, they are sewn on, as is the case with the belts issued with the valise equipment, they will be returned with the belts. Union lockets.

138. Regiments in possession of valise equipment will carry the shoeing smiths’ tools in two cases on the waist-belt, the contents of each case being as shown at page 139. Shoeing tools,
with valise
equipment.

139. Regiments having the knapsack equipment will have the same description and proportion of shoeing smiths’ tools, but they The same, with
knapsack
equipment.

SECT. V.

ARMS AND ACCOUTREMENTS.

. ARMS AND ACCOUTREMENTS—cont^d.

will be carried in one case, with shoulder-belt, similar to the case for small tools.

Pioneers' appointments. Not allowed to Depôts.

140. A detail of the appointments which will be carried by each of the 11 pioneers (1 Serjeant and 10 Privates) of the Service Companies of a Regiment will be found printed at page 139. Pioneers' appointments will not be supplied to Brigade or other Depôts.

Wood plugs for water-bottles.

141. In the event of the small wood vent plug issued with the water-bottle being lost, it will be replaced by the Corps, its value being too insignificant to make it an article of store.

Articles for musketry instruction for Martini-Henry arms.

142. One set of the under-mentioned articles will be supplied to each regiment armed with Martini-Henry rifles, for use in the musketry instruction, and will be accounted for as equipment:—

	One set.
Barrels, without actions, sighted, Martini-Henry	- 1
Actions, skeleton, with butts	- 1
Actions, waster, with butts	- 2
Implements, action	- 1

SECTION VI.—AMMUNITION.

I.—Service Small Arm Ammunition.**II.—Small Arm Ammunition for Practice and Exercise.****III.—Gun Ammunition and Rockets for Practice and Exercise.****IV.—Conveyance of Ammunition.****V.—Reserves of Gun and Small Arm Ammunition.****I.—Service Small Arm Ammunition.**

143. Service small Arm Ammunition will be supplied to the troops of all arms, at the rate of 20 rounds of ball cartridge for each rifle or carbine, and should always be in possession of Regiments except when returned into store as directed in paragraph 62.

Ordinary supply in possession of Regiments.

144. In cases of emergency the ordinary supply of Service Ammunition can be increased to such additional quantity as the General Officer Commanding may consider necessary.

Extraordinary supply in cases of emergency.

145. All Service Ammunition that is not in actual use, will be kept in the regimental magazines in charge of the Quartermaster.

Custody.

146. Extra issues of Ammunition remaining unexpended will be returned to the Ordnance Store Department on the termination of the service that necessitated the supply.

Return to Store of extra supply.

147. Application for Service Ammunition will be made on W.O. Form, 1456.

Requisitions.

148. As regards expenditure, the Service Ammunition and that supplied for practice and exercise will be treated alike, that longest in possession being invariably used up first. The expense voucher by which Service Ammunition is struck off charge, must refer to the circumstances, and authority (if any) under which the expenditure took place, and distinct expense vouchers must be rendered for service and practice or exercise Ammunition.

Expenditure and vouchers for.

II.—Small Arm Ammunition for Practice and Exercise.

149. The annual proportions of small-arm ammunition for practice and exercise for the regular forces are as follows :—

Proportions of small-arm ammunition allowed for practice and exercise.

—	Cavalry.	Artillery.	Engineers.	Infantry.	Army Service Corps.
For each Trained Soldier.					
Rounds, ball cartridge -	30	50*	100†	100†	50
" blank " rank -					
" and file " -	50	60*	60	60	30
For each Recruit, Officer or Man.					
Rounds, ball cartridge -	70	70*	90	90	45
" blank " -	40	20*	40	40	20

* For Garrison Artillery only. † Including 10 rounds for shooting matches.

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SECT. VI.

AMMUNITION.

SMALL ARM AMMUNITION—cont^d.

- 150.** Depôts going abroad. Ammunition for the use of drafts proceeding to join regiments abroad, is supplied under paragraph 136.
- 151.** Allowances for Horse and Field Artillery. The allowance for Horse and Field Batteries is—
- | | |
|--------------------------|-----------------|
| | Rounds |
| | Ball Cartridge. |
| For each battery - - - - | - 200 |
- 152.** Basis on which demands are to be calculated. The effective strength of the Corps on the 1st January at Home Stations, and 1st July at Foreign Stations, will form the basis for calculating the quantities of ammunition required for the annual practice and exercise; but should there be any reduction of strength before the annual practice and exercise takes place, Commanding Officers will only draw ammunition for the reduced numbers; and should there be an increase, ammunition for the additional strength will be issued.
- 153.** Officers may draw ammunition. Ball ammunition may be drawn at the rate of 60 rounds each for such Regimental Officers as express a wish to go through the course of "Individual Firing," but this ammunition will not be used for any other purpose.
- 154.** Allowance ample to cover all services. It is considered that the proportions laid down in paragraph 149 will cover all incidental requirements in a regiment, such as ammunition for third class shots, for testing rifles, or for funerals.
- 155.** Ten rounds allowed for Company competition. Ten rounds for each man of the annual supply of ammunition allowed may be expended in shooting matches between Companies or Battalions. The General Officer Commanding is authorised to sanction the issue of additional ammunition for matches not exceeding 130 rounds for each competitor per annum, the value of which, at the rates shown in the Vocabulary of Stores, will be credited to the public in the Paymaster's accounts.
- 156.** Practice by Sergeant Cooks, &c. Serjeant Master Tailors, Canteen Serjeants, Serjeant Cooks, Band Serjeants, Pioneers, and Bandsmen, will carry out their musketry practice, with the arms of the companies to which they are attached.
- 157.** Requisitions for ammunition to be made annually. An Officer in command of a Regiment or Corps entitled to be supplied with small-arm ammunition for practice and exercise, will annually make requisition for the same on W.O. Form 736, and forward it to the Commissary General. The requisitions should on no account reach that Officer later than the 15th March at Home Stations or 15th September at Foreign Stations.
- 158.** When Corps is going to leave. The requisition will be made, although at the time the Corps may be under orders to leave the district.
- 159.** But the issue can stand over. In the event of no issue of ammunition having been made prior to the Corps leaving the Station, the Commissary General will, on the application of the Commanding Officer, return the requisition to the Corps, with a certificate that no supply has been made upon it; he will also add a memorandum stating the quantity, if any, of service and other ammunition given into store. (See paragraph 62.)

AMMUNITION.

SECT. VI.

SMALL ARM AMMUNITION—cont^d.

160. On the Corps arriving at its destination, the requisition will be given to the Commissary General, at the new station, and it will be a sufficient authority for the supply being made as required. In the absence of this requisition no issue can be allowed.

Certificate obtained sufficient authority to draw an equal quantity.

161. All ammunition for a year not drawn by 31st December will be forfeited.

Ammunition not drawn cancelled.

162. The ammunition allowed for recruits, including officers joining for the first time, will be applied for from time to time as wanted, in such quantities as may be justified by the number of recruits actually present or expected to join soon; requisitions will be made on War Office Form 980.

Ammunition for recruits.

163. As blank small-arm ammunition is not allowed for Field Artillery, such quantities as may be required for funerals will be drawn from the nearest Ordnance Store Depôt, on the requisition of the Officer Commanding the Battery. Should, however, the Depôt be at a distance, a quarter barrel of blank ammunition will be supplied to the Officer Commanding the Battery.

Blank ammunition for funerals of Field Artillery.

164. Certain special allowances of blank ammunition for field days are provided for by paragraph 166.

Blank ammunition for field days.

III.—Gun Ammunition and Reckets for Practice and Exercise.

165. The annual proportions of gun ammunition for practice and exercise for the Royal Artillery are as follows: Horse or Field Brigades, 200 rounds per Battery for practice, and 50 rounds per Gun for exercise, distributed as shown in the following table :—

Proportions.

Proportion for R.H.A. and Field Brigades.

Cartridges, empty	{ flannel, service - - -	200	
	{ silk, exercise - - -	300	
Fuzes	{ percussion, field - - -	85	
	{ wood, time, M.L. 9" or 5" * - - -	100	
	{ blank or exercise, L.G. { 16-pr. - - -	450	
	{ " " " " { 9-,, - - -	300	
Gunpowder, lbs.	{ service { R.L.G. { 16-pr. - - -	600	
	{ " " " " { 9-,, - - -	350	
	{ " " " " { 16-pr. - - -	41 $\frac{1}{8}$	
	{ " " " " { 9-,, - - -	2 $\frac{1}{2}$	
	{ shell, L.G. { 16-pr. - - -	152	
	{ " " " " { 9-,, - - -	63 $\frac{1}{2}$	
Primers	{ gun cotton, cylinder of - - -	1	
	{ shrapnel shell - - -	50	
Shells, empty, with plugs	{ common - - -	144	
	{ shrapnel - - -	50	
Shot, case - - -	- - -	6	
Silk, raw, ozs.	{ 16-pr. - - -	71 $\frac{1}{8}$	
	{ 9-,, - - -	4 $\frac{1}{2}$	
Tubes, friction, copper, short	- - -	550	
Wads, papier mâché, fuze hole, G.S. for common shells	- - -	135	
Worsted, white, ozs.	{ 16-pr. - - -	5	
	{ 9-,, - - -	4	

For instructional purposes, 25 unserviceable, M.L. 9 secs. or 5 secs., wood time fuzes, are allowed annually for each battery of Horse and Field Artillery.

Including 10 per cent. spare.

* 9" or 5", at the discretion of Commanding Officers

SECT. VI.

AMMUNITION.

GUN AMMUNITION AND ROCKETS—cont^d.

Additional exercise ammunition allowed for reviews and field days.

166. In addition to the exercise ammunition allowed in each year, an extra allowance may be ordered to be supplied, at the discretion of General Officers Commanding, on the occasions of reviews and field days, to Regiments and Corps present at the under-mentioned stations. This extra allowance must not exceed the following proportions during the year, but should be made use of on all occasions of reviews and garrison field days, so that the regimental supply may be left available for purely regimental purposes:—

	Blank Small-arm Ammunition.	Blank Gun Ammunition.
Aldershot	- 100 rounds for each man,	100 rounds for each gun.
Colchester	- —	60
Curragh	- 100	100
Dover and Shorncliffe	40	60
Dublin	- 60	60
Gibraltar	- 40	—
Woolwich	- 40	80

The above proportions will be calculated on the number of men and guns at each station on the 1st June in each year.

Supply to be made direct to Corps.

167. Commanding Officers will make requisition on W.O. Form 977, for the ammunition to be supplied under the foregoing paragraph, and it will be issued as required to each Regiment or Battery.

Authorised salutes to be at public expense. Quarantine.

168. The ammunition for all authorised salutes and signal guns will be supplied at the public charge; but in the event of guns being fired to enforce quarantine or port regulations, the value of the ammunition used for such purpose will always be recovered by the Ordnance Store Officer at the station.

Proportions for Garrison Artillery.

169. In localities where both rifled M.L. and B.L. ordnance is mounted, the following proportions of practice ammunition for batteries of Garrison Artillery will be supplied annually:—

Nature of Projectile.	R.M.L.				R.B.L.		Mortars.	Total.		
	12, 11, and 10-inch.	9-inch.	7-inch.	64 and 80-prs.	7-inch.	40-pr.				
Shells {	empty {	common	—	10	25	5	5	—	45	
		double	—	10	—	—	—	—	10	
		mortar	—	—	—	—	—	—	25	
	filled {	Palliser	—	5	10	—	—	—	—	15
		segment shrapnel	—	—	—	—	15	10	—	25
Shot, palliser	—	5	5	5	—	—	—	—	15	
Total	—	—	—	—	—	—	—	—	150	

AMMUNITION.

SECT. VI.

GUN AMMUNITION AND ROCKETS—cont^d.

a. At stations where there are no guns over 9-inch calibre, the five Palliser shot to be fired from such guns, will be added to those allowed for 7-inch.

b. In the event of there being no 9-inch guns, the proportion for these guns will be added to the 7-inch.

c. If there are no 7-inch guns, the proportion to be fired from the 9-inch guns will be increased by five Palliser shot and 10 common shell, and from the 80-prs. and 64-prs. by 15 common shell and 5 shrapnel shell.

d. Should there be rifled M.L. guns only, the additional quantities required to complete up to 150 rounds will be fired from smooth-bore ordnance.

e. Should there be no 64-prs. or 80-prs. the rounds to complete will be fired from rifled B.L. guns, adding to such guns 10 common and 10 segment shell, as also 20 solid shot, in the case of the 7-inch segment shell being fired as shot.

f. Should there be 64-prs. or 80-prs. only, and no B.L. guns, then the proportion to be fired from the 64-prs. or 80-prs. will be increased by 25 common shell and 10 shrapnel shell.

g. Should there be no rifled M. L. guns of 7-inch and upwards, the proportion will be—

Nature of Projectile.		M. L. 64-pr. or 80-pr.	B.L.		Mortar.	Total.
			7-in.	40-pr.		
Shells	empty	common	40	10	10	60
		mortar	—	—	—	25
	filled	segment	—	20	5	25
		segment	—	10	10	20
		shrapnel	20	—	—	20
Total		—	—	—	150	

h. At stations where all the above natures of ordnance are not available for practice, the proportions allotted to the guns not available are to be added to that of those that are, under the following conditions:—

i. If 64-prs. and 80-prs. are not available, the proportion of 7-inch and 40-prs. will be:—

7-inch B.L.	{	common shell,	20.
		segment „	60 (40 as shot).
40-pr. B.L.	{	common „	15.
		segment „	15.
		solid shot „	15.

j. When there are no 40-pr. B.L. guns the proportion will be added to the 7-inch, segment shell being substituted for solid shot.

k. If there are no 7-inch the proportion will be added to the 40-pr., but in this case solid shot will be used in place of segment shell fired as such.

SECT. VI.

AMMUNITION.

GUN AMMUNITION AND ROCKETS—cont^d.

l. If mortar practice cannot be carried on, 15 common and 10 shrapnel shell will be added to the 80-pr. and 64-pr. R.M.L. guns, or the same number of empty segment shell or solid shot, to the 7-inch R.B.L. and 40-pr. guns, as the case may be.

m. In the event of rifled guns of position, or field guns, forming a portion of the armament of the garrison or fortress, the Officer Commanding Royal Artillery may use his own discretion in carrying on practice from such guns: the number of rounds expended will form part of the total allowance of 150 rounds per battery of Garrison Artillery.

n. All Palliser projectiles will be fired with battering charges.

o. All other projectiles will be fired with full charges.

p. All common shell except the 80-pr. and 64-pr. will be fired without fuzes, empty, so far as powder is concerned, but they will be weighted, with sand or other material, up to their "filled" weight. They will be plugged with wood, the metal plugs being returned to store. In places where firing live shell is permitted, 80-pr. and 64-pr. shell will be loaded and fired as for service. In places where no live shell can be used common shell will be fired in place of shrapnel, and the whole will be loaded with blowing charges and properly fuzed.

q. Fuzes, with blowing charges only, will be supplied for mortar shells.

Coast Brigade.

170. Divisions of the Coast Brigade will have the same proportions as Garrison Batteries, the different detachments participating, as far as possible, in the practice.

Dismissal of recruits.

171. One round with shot and six of blank ammunition per man are allowed for dismissal of recruits. These will be fired from Field or Garrison Ordnance, according to whether the recruit belongs to a Horse, Field, or Garrison Brigade.

Requisitions for gun ammunition.

172. Demands for gun ammunition will be dealt with in the manner laid down for small-arm ammunition.

For recruits, how made.

173. The ammunition required for recruits will be applied for as from time to time required; requisitions for the same being made (on W. O. Form 979) by the Officer Commanding the Royal Artillery in the district or garrison.

Ammunition longest in regimental charge to be first expended.

174. The ammunition which has been longest in regimental charge will be first expended, and will be replaced by the next supply from store.

Rocket practice.

175. At home 20 Hale's rockets will be supplied yearly by the Commandant to each Battery of Royal Artillery, Horse, Field, or Garrison Brigades, which carries out its annual practice at the School of Gunnery, Shoeburyness. (See paragraph 112.)

IV.—Conveyance of Ammunition.

Notice prior to forwarding ammunition.

176. Neither gunpowder nor ammunition of any kind, will be forwarded by or to any Corps or Ordnance Depôt, until the Officer forwarding the same is satisfied that the Consignee is ready to receive it.

AMMUNITION.

SECT. VI.

CONVEYANCE OF AMMUNITION—cont^d.

177. Whenever ammunition is conveyed in wagons or carts furnished by the troops, or Army Service Corps, the loading will be performed by the Military, who will be held responsible for its correctness, as well as for the condition and suitability of the transport.

Responsibility as to loading and condition of wagons.

178. When Military or Army Service Corps transport is required by the Ordnance Store Department, the Commissary will apply for it, merely stating the nature and weight of the ammunition to be conveyed; and the Officer Commanding will decide what transport shall be sent. Should conveyance by rail be necessary, the time at which the wagons should arrive at the Railway Station will be stated in the application, and the Officer Commanding will notify the hour when the wagons will be at the Ordnance Depôt to effect that object. The wagons will be unloaded at the Railway Station by the railway porters.

Application for military transport.

179. A similar course will be pursued by the Consignee for the conveyance of the ammunition on arrival from the railway to its destination, excepting that the wagons will be loaded by the railway porters, under the supervision of the Military or Army Service Corps, who will, however, still be responsible that the wagons are properly loaded.

Transport of ammunition from railway.

180. When horses only are required from the Military or Army Service Corps, the application will state the number of wagons to go, the weight of ammunition to be conveyed, and the time the convoy should reach its destination. The Officer Commanding will then send such horses as he may consider necessary, informing the Commissary when he may expect them at the Depôt.

When horses only are applied for.

181. An officer or subordinate of the Ordnance Store Department will be in attendance at the Depôt at the time appointed to hand over the packages, convoy notes, and any wadmil-tilts or other coverings that may be required, to the Officer commanding the party, unless a conductor of the Ordnance Store Department is appointed to accompany the convoy, which will invariably be the case whenever ammunition is forwarded by railway or other public conveyance. In the latter case the conductor will be responsible for the ammunition, wadmil-tilts, or other coverings, and will retain the convoy notes. Convoy notes will be dealt with as laid down in paragraph 72.

Charge of packages, &c.

Conductors with convoys.

182. A receipt will be given by the Officer in command of the party for any coverings supplied to him, and he will return them into Store when no longer required.

Receipt for wadmil-tilts.

183. In the event of the orders existing in the district rendering a military escort necessary, the Consignor will apply to the Officer Commanding for the escort, stating the day and hour when it will be required, and, unless the transport is provided by the troops, the number of wagons or carts to be escorted.

Escorts, application for by consignor.

SECT. VI.

AMMUNITION.

CONVEYANCE OF AMMUNITION—cont^d.

and by consignee.

184. Should the ammunition be forwarded by railway, or water carriage, and the escort not accompany it, the Consignee will make arrangements for the attendance of an escort, if required, to meet the ammunition on arrival, and conduct it to its destination.

Smoking prohibited.

185. Officers in command of escorts will prohibit smoking near the wagons, and will see that none of the party have lucifer matches in their possession.

Military Consignees.

186. When ammunition is consigned to the troops, the Officer who is the Consignee will give to the conductor a receipt on the duplicate convoy note, and will be furnished by the conductor with the triplicate copy which he will retain.

Hired transport for conveyance to troops.

187. Should it be necessary to hire wagons for the conveyance of ammunition when consigned to the troops, the arrangements will be made by the Department whose duty it is to provide such transport, on the application of the Officer Commanding.

Metal cylinders.

188. In the conveyance of small quantities of small-arm ammunition by rail in the United Kingdom, in order to expedite issues to regiments and also to obviate the expense of the employment of powder vans, metal cylinders adapted for containing half and quarter barrels will be used. These cylinders will not, however, be required when the cartridges are packed in small arm ammunition boxes.

To be returned at once by same mode of conveyance.

189. Commanding Officers and others will immediately on receiving these cylinders, empty and return them, with the spanners and bags supplied with them, to the Ordnance Store Officer at the station from which they were sent, by the same mode of conveyance by which they arrived.

V.—Reserves of Gun and Small Arm Ammunition.

Adjutant General of Army in the Field.

190. The Adjutant General of an Army in the Field is responsible to the General Officer Commanding for the supply of ammunition for that army.

Returns of Royal Artillery and Ordnance Stores Reserves.

191. To enable him to perform this duty efficiently, he will be furnished as often as he may deem necessary, by the Officer Commanding the Royal Artillery and the Commissary General with returns of the Reserves in their respective charge.

Generals of Divisions responsibility.

192. General Officers commanding Divisions are responsible for maintaining their reserves of ammunition, and they will be furnished as often as may be required with the necessary reports from the Officer commanding the Royal Artillery of the division. Any deficiency in the regulated amount of ammunition is to be immediately made known to the Adjutant General of the Army.

Proportion of gun and small-arm ammunition.

193. As a general rule, subject to such modifications as the nature of the service may require, the reserves of ammunition for Field Service are calculated at 500 rounds for every gun, and 480 rounds for each rifle. These proportions will usually be distributed

AMMUNITION.

SECT. VI.

RESERVES OF GUN AND SMALL ARM AMMUNITION—cont^d.

in the following manner, subject to the approval of the General Officer Commanding:—

—	Rounds of Ammunition.		
	For each Gun.		Small Arm for each Rifle.
	9-pr.	16-pr.	
In possession of the Troops - - - -	148	100	70 } 100
Regimental Reserve - - - -	—	—	30 } 100
Field Reserves with the } Divisional - - - -	108	72	40 } 180
Royal Artillery - } Army Corps, in 3 sections -	44	108	40 } 180
Grand Depot and Intermediate Reserves, with the Ordnance Store Department.	300	280	180
	200	200	300
	500	480	480

194. The Regimental Reserve of 30 rounds for each rifle (in addition to the 70 rounds in possession of the Troops) will accompany each battalion in the field in charge of the Officer commanding, to move with the Battalion and be kept supplied by demands on the Divisional Reserve.

Regimental Reserve in charge of Officer commanding.

195. The Transport of the Regimental Reserve for a battalion of 1,000 men will require:—

Transport of Regimental Reserve.

—	Men.	Animals.	Weight of Ammunition.
3 Small-arm ammunition carts, each carrying } 9,600 rounds of ammunition - - - -	3	6	—
1 Non-commissioned Officer - - - -	1	—	—

Making a total of three carts, four men, and six animals. Pack animals, however, will be exclusively employed, where, from the nature of the country, carts would not be available.

The load for a pack animal will be:—

2 boxes, weight, 78 lbs. each - - - -	156 lbs.	} Total weight, 206 lbs., exclusive of forage.
Pack-saddle - - - - -	34 ,,	
Cover - - - - -	6 ,,	
Strappings and other articles - - - -	10 ,,	

Load for a pack animal.

196. For Brigades and Divisions, the General in Command will distribute his reserve ammunition transport, or mass it as he may think best; while for smaller bodies of Troops, pack animals could accompany and supply one or more detached Companies over any ground or on outpost duty.

Brigades and Divisions.

Companies and outpost duties.

* Exact proportions 14½ and 13½ respectively.

SECT. VI.

AMMUNITION.

RESERVES OF GUN AND SMALL ARM AMMUNITION—cont^d.

Reserves in charge of Royal Artillery.

197. The divisional and army corps or general reserves will be in charge of the Royal Artillery, and will be conveyed and replenished as herein-after directed. These Reserves will form part of the field equipments of the Artillery, and will not be in charge of the Ordnance Store Department. A detail of the establishment of these reserves is printed at page 84.

Reserves in charge of Ordnance Store Department.

198. The remaining reserves will be in charge of the Ordnance Store Department, and will be placed in dépôts.

Transport of Divisional Reserves.

199. The first reserve of ammunition for the guns is contained in the divisional reserve. The divisional reserve for small-arms will be conveyed in ammunition carts attached to each divisional reserve. Should the state of the country in which the army is acting render it necessary to adopt any other method of transporting this ammunition, the means will be determined by the Commander of the Forces, and carried out by the Royal Artillery.

Divisional Reserve to be always at hand.

200. The divisional reserve is under all circumstances, to be at hand, and in the event of its being found necessary to separate the carts from the divisional reserve to which they are attached, the Divisional Commanding Officers of Artillery must make arrangements for their being placed under proper charge, in some safe spot, easily accessible to the troops, in order that no unnecessary delay may occur when occasion shall arise for making issues to corps whose supplies are exhausted.

Army Corps Reserve to be kept up with the army, but out of fire.

201. The army corps or general reserve will be always kept up with the army, and as far as practicable out of fire.

Replenishment of Divisional Reserves.

202. The Artillery Officers commanding the reserves will be responsible to the Officers commanding the Divisions and Army Corps respectively, that the ammunition of each divisional reserve is from time to time completed, so far as circumstances will permit, from the Army Corps or general reserve.

Replenishment of Army Corps reserve.

203. The latter reserve will be completed from the reserves in charge of the Ordnance Store Department, upon the requisitions of the Officer Commanding the Royal Artillery, supported by the receipts for the issues made to the Troops. On emergency, however, the Ordnance Store Officers will make issues on the requisitions of the Officers immediately commanding the several Royal Artillery reserves, but such issues will be reported by the Commissary in charge of the Dépôt to the Commissary General at head quarters for covering approval.

Issues on emergency.

204. Before issuing the boxes containing small-arm ammunition to the Army Corps reserve, the screws securing the lids are to be removed in the presence of the Officer, or Non-commissioned Officer, to whom the boxes are delivered.

Ammunition boxes to be unscrewed before issue.

Intermediate reserves.

205. Should the base of operations, where the grand dépôt of reserve is placed, be further distant than an ordinary two days' march from the advanced dépôts last mentioned, intermediate dépôts will be required; upon the organization and disposition of

AMMUNITION.

SECT. VI.

RESERVES OF GUN AND SMALL ARM AMMUNITION—cont^d,

which the Adjutant General of the Army in the Field and the Commissary General should take the orders of the General Officer Commanding, who will determine what course should be followed to ensure a regular and sufficient supply of ammunition from the grand depôt of reserve, for the use of the army.

206. Officers commanding Corps in the field will obtain their supplies of ammunition on requisitions direct from the Officers Commanding the Artillery reserves.

Regimental requisitions for small-arm ammunition.

207. The Officer commanding Artillery reserves will be careful to recover from the front the empty ammunition boxes, and return them to the Ordnance Store Department by the Artillery wagons sent back to be replenished from the depôt reserves, and the Ordnance Store Officer in charge of the depôt will report to the Commissary General if this service be neglected.

Empty small-arm ammunition boxes.

208. One Small-Arm Ammunition Cart will be attached to the Royal Horse Artillery for each brigade of Cavalry.

Small-arm ammunition cart for Cavalry.

209. The following stores will be issued with each small-arm ammunition cart :—

Stores for a small-arm ammunition cart.

Box, tin, grease, half-round, with 3 lbs. of grease	1
Bucket, leather	- 1
Ropes, drag, light, pairs	- 1
Harness, G.S., single sets, without sheepskins.	{ near - 1 off - 1

The following small stores will be carried in a leather pocket :—

Spanner, McMahan's 9-inch	- 1
Drivers, screw, 6-inch	- 1
Hammers, claw, 14 ozs.	- 1
Pincers, carpenter's, pairs	- 1

210. In a fortress or garrison the General Officer Commanding will hold the Commissary General responsible, that the reserve of small-arm ammunition is equal to the authorised proportion, and available at all times for issue, if required.

Reserves in garrison.

SECTION VII.—SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

Saddlery and harness.

211. The saddlery and harness of the Service will consist of the articles enumerated in pages 106 to 109. Saddlery will be supplied at the public expense to all officers provided with horses the property of the public, to the Quartermaster and Riding-master of Field Brigades, Royal Artillery, and to officers of Royal Engineers attached to Royal Engineer Train, but not to the Colonels Commanding, the Lieutenant-Colonels, and Adjutants of Field Brigades, Royal Artillery.

Stable necessaries.

212. Stable necessaries, also nose bags, corn sacks, corn bags, and the other horse appointments specified in the tables printed at page 109, will be supplied on demand for all mounted Services for horses which are the property of the public.

Unserviceable stable necessaries need not be returned.

213. Unserviceable stable necessaries need not be returned to store when replaced by fresh issues.

If unserviceable under the time allowed must be paid for.

214. In the event of stable necessaries becoming unserviceable before the expiration of the period of duration prescribed for them, they must be replaced at the expense of the troops.

Pannels may be issued unstuffed.

215. In order to obviate the delay in the supply of harness and saddlery caused by the necessity of issuing stuffed pannels; demands from the mounted services at home for pannels required to replace those unserviceable, or to complete the harness and saddlery on moderate augmentations of Corps may be met by the issue of empty cases and hair. On receipt by the Corps, the cases will be converted into pannels by the regimental artificers without charge, and the following proportion of materials will be supplied for stuffing each pair :—

				lbs. ozs.
Officer's old pattern	-	-	flock, white	3 4
" new pattern	-	-	hair, horse	3 8
Universal pattern	-	-	" "	3 8
Harness	{	new pattern	driver's	3 0
			luggage	2 0
		old pattern	driver's	3 8
			luggage	2 8

Twine and thread.

Not to be issued in small quantities.

216. One quarter of an ounce of quilting twine, and one-sixteenth of an ounce of whited-brown thread will be allowed for each pair of cases. No issues under one ounce will be made; the regimental supply will be made use of, when smaller quantities are required.

SECTION VIII.—CAMP EQUIPMENT AND ENTRENCHING TOOLS.

217. The proportions of Camp Equipment and Entrenching Tools allowed for the various branches of the army are contained in the lists printed at pages 118 to 132. For the proportion of spare articles allowed, see page 132.

For general service.

218. When the General Officer Commanding finds it necessary to alter the regulated proportions of stores supplied in camp, he will report the circumstance to the Secretary of State for War as laid down in paragraph 3.

Alteration in proportions.

219. Staff Officers and others of the Military and Civil Departments will draw Camp Equipment according to their relative rank.

Staff Officers, Military and Civil Departments.

220. Wooden bottoms or floors for circular tents will be issued for use, only under exceptional circumstances affecting health; as, for instance, when it may be found actually necessary to employ circular tents as hospitals, or for the reception of women and children who cannot be otherwise accommodated, or when it may be impracticable to remove troops from under canvas in very inclement weather.

Wood floorings.

221. The necessity for the use of wood floors, will in every case be certified to by the Principal Medical Officer, and the General Officer Commanding will moreover, before giving his sanction to the issue, apply whenever practicable for the previous approval of the Secretary of State. The General Officer Commanding will, when the issue is ordered under his authority, fully report the circumstances which render their supply necessary, for the information of the Secretary of State.

Necessity for to be certified to by Principal Medical Officer.

222. The provision of waterproof ground sheets, which it may become necessary to issue to troops in camp under certain circumstances, as when ground is wet, or when straw cannot easily be procured, will likewise be subject to special consideration and report, the necessity being certified to by the Principal Medical Officer.

Waterproof ground sheets.

223. Picketing posts, ropes, and mauls, also waterproof horse-covers, forage nets, and the horse appointments, except corn-bags, detailed at page 109, will be supplied free of charge for the regulated number of officers' horses. Certain articles, as detailed at page 125, may be issued for hired horses. No other articles of horse equipment will be supplied except for horses the property of the public.

Picketing implements and horse appointments.

224. The horses of the Staff, those of the Infantry, as well as those of the Officers belonging to the various Departments, will be picketed according to the system adopted in the Cavalry.

Picketing Officers' horses, Staff.

SECT. VIII.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Chain reins
and logs.

225. As it is possible that in some billets on the line of march chain reins and logs may be required, each Commanding Officer will see, that prior to leaving the station he obtains from the Ordnance Store Officer such a number of each as he may consider necessary, which will be carried on the horses, and delivered into store on arrival at his destination. (*See paragraph 228.*)

Barrack stores
in standing
camp.

226. Such Barrack Stores as are necessary for troops when in standing camp will be specially applied for to the Ordnance Store Department by Commanding Officers.

Field service
proportions for
flying columns.

227. Troops proceeding from standing camp or barrack to take part in flying columns, will be provided, on demand, with such articles of camp equipment as they may require, in the proportions laid down generally for field service.

Mounted corps
proceeding by
route.

228. Mounted corps proceeding by route march in the United Kingdom, require no camp equipment when the men and horses are billeted nightly. Chains, reins, and logs will be provided as laid down in paragraph 225. In cases where it is necessary to encamp during the march, Officers Commanding regiments and corps will make requisition previous to marching, for the camp equipment they require, being guided generally by the proportions laid down for Field Service, but demanding no articles that are not absolutely necessary.

All articles to
be thoroughly
dried before
being given
into store.

229. To prevent the great injury which arises from damp and mildew, tents, blankets, nose-bags, sheepskins, canvas and leather buckets, and other canvas, linen, cotton, woollen, or leather articles which have become wet while in use, will be thoroughly dried, and cleaned as far as possible by the troops, before being returned into store.

Camp kettles
to be cleaned.

230. Camp kettles and other articles liable to injury from rust, will also be dried and cleaned by the troops before being sent into store.

Troops under
canvas moving.

231. When troops under canvas have to march on immediate orders, the Commissary General will confer with the Officer Commanding the troops, as to the steps which should be taken for the drying and cleaning of the camp equipage prior to its being returned into store on the breaking up of the camp.

Officer Com-
manding to be
informed of
irregularities.

232. The Commissary General will bring to the notice of the Officer Commanding the troops, any instance in which the camp equipment is not returned into store in a proper state, due allowance being made for fair wear and tear.

Tents for
instruction in
pitching and
striking.

233. Four used circular tents may be supplied to each Regiment requiring them, for the purpose of instruction in pitching and striking. They will be brought on charge in the Equipment Ledgers, and will be dealt with as Equipment.

SECTION IX.—TOOLS.

I.—Artificers Tools.

II.—Tools for Military Tradesmen.

I.—Artificers Tools.

234. An Armourer's Forge with Tools (as detailed in the tables, page 133), will be supplied to each Corps provided with an Armourer Serjeant. These articles will be kept up by the Armourer Serjeant for the period of duration assigned to them (see paragraph 342), and will be inspected quarterly by a competent person under the orders of the Commanding Officer, who will certify in the equipment accounts that this service has been performed. A special examination of the forge and tools will, moreover, be made on the transfer of these articles from one Armourer Serjeant to another, and a report made by the Commanding Officer for the information of the Secretary of State, should they be found to be incomplete, or unlikely to last the period of duration. When a regiment takes the field, the forge and armourer's tools will be returned into store.

Supply of forges and tools for armourers.

235. The extra tools specified at page 137 will be supplied to Regiments of Cavalry for the use of Armourer Serjeants in repairing the iron and metal work of accoutrements, saddlery, and appointments. These tools will for convenience be carried in the Armourer's forge, but in other respects will have no connexion with it, either as regards the service for which they are supplied, or the manner in which they are to be maintained. They will be accounted for as all other Regimental Equipments, and will be replaced as required on becoming unserviceable.

Additional tools for armourer serjeants.

Will not be treated as armourers' tools.

236. Instructions for packing Armourers' tools and spare parts of Small Arms, to be carried out by regiments on embarkation for distant Foreign stations, are printed in Appendix XV. These directions do not apply to troops proceeding to the Mediterranean, West Indies, British North America, or Bermuda.

Instructions for packing armourers' tools, &c.

237. Tools supplied for the use of regimental artificers in repairing the service equipments, or for the general service of the army, will not on any account be employed for private purposes. Lists of these tools will be found in Appendix XVI.

Tools supplied for repairs to equipments not to be otherwise used.

238. The tools required by the various mounted services for repairing harness, saddlery, and horse appointments, will be issued in the proportions specified at page 138.

Mounted services.

239. Tools for opening packages are supplied in the proportion laid down at page 138.

Opening packages.

240. Artificers of Garrison Brigades, Royal Artillery, will be supplied with tools from the public store, when they are

Artificers of Garrison Brigades.

SECT. IX.

TOOLS.

ARTIFICERS TOOLS—cont^d.

employed under the orders of the Commissary General, with the consent of the Officer Commanding Royal Artillery, in repairing gun carriages, platforms, and other stores, in conjunction with civilian and departmental artificers.

Pioneers and shoeing smiths.

241. The proportions of tools supplied to Regiments for pioneers and shoeing smiths, are laid down in page 139.

II.—Tools for Military Tradesmen.

Tools for trades.

242. With the view of encouraging the employment of soldiers in trades, sets of tools will be supplied to regiments at the public expense, under the special sanction of the Secretary of State in each case, and subject to the conditions,

- (a.) That they remain in charge of the regiment to which they may be issued,
- (b.) That they be kept in order, repaired, or replaced when lost or worn out by use, at the cost of the regiment,
- (c.) That articles required to replace any of those issued, be demanded of the Commissary General, in order to ensure uniformity of pattern.

Not allowed to Brigade Depôts.

243. The Commanding Officer will moreover direct an inspection of these tools to be made quarterly, and will certify in the Equipment Ledger that this service has been performed. Lists of these tools will be found printed in Appendix XVI., page 205. Tools for trades will not be allowed to Brigade Depôts.

SECTION X.—MISCELLANEOUS SUPPLIES.

- I.—Army Signalling Equipment.**
II.—Targets for Gun Practice.
III.—Books and Games.
IV.—Miscellaneous Stores.

I.—Army Signalling Equipment.

244. On the appointment of an Instructor in a Regiment or Corps, the Commanding Officer will forward to the local Ordnance Store Officer a requisition, in duplicate, on War Office Form No. 469, for the stores that constitute the regimental signalling equipment. Stores, requisition for.

245. These supplies will—except as provided in the following paragraph—be confined to Regiments of Infantry and Cavalry, to Head-Quarters of Royal Artillery Districts (for Garrison Artillery), and to Head-Quarter Stations of Commanding Royal Engineers (for Companies of Royal Engineers). They will not be supplied to Brigade Depôts. To what Corps to be supplied.

246. The stores will also be supplied to Batteries of Royal Horse and Field Artillery, provided that there are Instructors attached to them who have certificates of qualification, and that the issue is deemed necessary by the General Officer under whom the Batteries are serving. Not to Brigade Depôts.
Batteries of R.H.A. and Field Artillery.

247. The signalling equipment of a Regiment, Station, or Battery will consist of the articles specified at page 140. On a Regiment proceeding on active service, articles supplied for instructional purposes will be given into store. Detail.
Articles for instruction.

248. Commanding Officers, in making requisitions for materials for signalling lamps, will state thereon the number of classes for which the supplies are demanded, but the classes are not to exceed three in each year. Lamp requisitions.
Number of classes to be stated.

II.—Targets for Gun Practice.

249. As a general rule, all practice will be carried on, where the locality permits, at common board targets (6 ft. × 6 ft. × $\frac{1}{2}$ in.), placed on the land; advantage being taken, on the sea coast, of the tide being out, to place the target on the sand or beach. In cases where the practice has to be carried on seawards, or over water, targets of the regulated pattern are to be used. The proportion of targets allowed will be found specified at page 140. Supply of targets for Artillery practice.

250. At localities where practice is carried on by more than one battery, it is expected that, with common precautions, the proportions laid down may be considerably reduced, provided that due attention is paid to repairs. Proportions reduced.

SECT. X.

MISCELLANEOUS SUPPLIES.

TARGETS FOR GUN PRACTICE—cont^d.

Estimate for
boats by
Officer Com-
manding R.A.

251. The Officer Commanding the Royal Artillery will furnish the Senior Officer of the Commissariat Department with an approximate estimate of the amount that will be required for the hire of boats for laying, and for bringing back the targets, and all boats required for this purpose will be hired by that Department.

Targets to be
made locally.

252. At foreign stations, the targets will be made locally except under very special circumstances.

Field Artillery,
manufacture
and repair.

253. In the Field Artillery, the manufacture and repair of targets will be carried out by the Battery Artificers, under the orders of the Officer Commanding Royal Artillery, without any Working Pay; any materials required being supplied by the Ordnance Store Department. Targets so made will be brought on charge in the Battery Equipment Ledgers.

Garrison
Artillery.

254. In Garrison Artillery, Working Pay will be allowed both for the manufacture of and current repairs to targets, subject to the instructions contained in paragraph 314.

Steps to be
taken at close
of practice.

255. At the close of the practice of each battery, the targets used will be put in a state of thorough repair, and handed over to the succeeding battery in a serviceable state.

Targets to be
returned.

256. When the Annual Practice at any station is completed, the Officer Commanding the Royal Artillery will return the targets in his possession to store in a serviceable state, and the Ordnance Store Department will arrange for their careful custody until again required. All targets condemned as unserviceable and beyond repair will also be returned to store.

III.—Books and Games.

Books and
games on board
a ship.

257. Troops embarking for distant stations elsewhere than in India, on board Her Majesty's Troop Ships or in hired vessels will, if the number of men to be embarked amount to 100, be supplied with Books and Games in accordance with the proportions specified at page 141.

Stations where
supplies are
to be kept.

258. Supplies of Books and Games will be maintained at Woolwich, Portsmouth, Gravesend, and Queenstown, and are to be put on board ship by the Ordnance Store Officer at the station, under instructions from the Surveyor-General of the Ordnance, who will receive an application for them on each occasion from the Quartermaster-General at head-quarters. When troops embark at other home ports the supplies will be sent there from one of the above-named stations, if time admits.

Receipts and
invoices to
be given in
duplicate.

259. The Ordnance Store Officer issuing the supply will obtain from the Officer in Command a receipt in duplicate for the articles issued, and will cause the Officer Commanding to be supplied with two priced delivery notes or invoices. He will forward to the Ordnance Store Officer at the station to which the troops are proceeding a copy of the receipt given.

Ordnance Offi-
cer at station
to be informed.

MISCELLANEOUS SUPPLIES.

SECT. X.

BOOKS AND GAMES—cont^d.

260. The Officer Commanding will give over the Books and Games to the custody of an Officer or a Non-commissioned Officer, and will issue such orders as he may deem necessary for their care and preservation. He will cause weekly inspections to be made to see that all are complete, and for the purpose of assessing any damages after allowing for fair wear and tear.

Officer Commanding to make arrangements for their care.

261. The Officer Commanding will, on arrival at his destination, deliver over to the Ordnance Store Department one of the invoices alluded to in paragraph 259, together with the articles supplied, and the Ordnance Store Officer will cause the same to be examined, and the troops to be charged, before landing, with the amount of the damages assessed by the Commanding Officer; the amount received being credited to the public.

Damages to be assessed on arrival by Officer Commanding.

262. Should any troops land at an intermediate port the Officer in command will, before the disembarkation takes place, inspect the articles with a view to the amount due on account of losses and damages being recovered from the troops prior to leaving the ship.

If troops land at an intermediate port.

263. If troops are returning home in the same vessel, the Ordnance Store Officer will hand over the articles originally issued to the Officer Commanding in the manner laid down for the first issue, except that he will forward to the Commissary-General, Royal Arsenal, the list of stores supplied.

Troops returning home to have books handed over.

264. If there are no troops likely to return home within a reasonable period, the Ordnance Store Officer will send the articles received to the Ordnance Store Officer in charge, Royal Dockyard, Woolwich, by the first opportunity.

If troops do not return home, the books to be sent home.

265. Should the Officer Commanding become non-effective, or land at a station nearer than that fixed for the entire voyage, the next Officer in rank will take over these supplies and see that they are correct and in good condition.

Should the Officer Commanding become non-effective, steps to be taken.

266. On arrival at home of a ship with troops, the Ordnance Store Officer at the port of disembarkation will receive over the Books and Games, and after seeing that the troops have been charged with the amount of damages, as laid down in paragraph 261, will forward the articles to the Ordnance Store Officer in charge, Royal Dockyard, Woolwich.

Return at a home station, disposal of books.

IV.—Miscellaneous Stores.

267. Standards for measuring recruits, pace sticks, ropes for drill, saluting flags, and regimental camp colours, will be provided by Officers Commanding out of the Stationery Allowance, except in the case of head-quarters of Brigades of the Royal Artillery, when they will be supplied, if necessary, by the public, and will be carried about by the Brigade.

Standards, pace sticks, and other articles.

268. The supply of handcuffs, squad bags, writing cases, book chests for Medical Officers, record boxes, and boxes and

SECT. X.

MISCELLANEOUS SUPPLIES.

MISCELLANEOUS STORES—cont^d.

Musical instru-
ments.

Book chests.

Instruments
allowed to
Fortification
classes.

Veterinary
stores.

chests for industrial and other school materials are specified at page 143. For the supply of musical instruments, see page 142.

269. Book chests will be accounted for in the Regimental Equipment Ledgers. See page 144. They are not allowed to Batteries of Royal Artillery, Companies of Royal Engineers, or Brigade Depôts.

270. The instruments detailed at page 142, will be supplied to regiments in which a Fortification class has been formed. They will not be supplied to Batteries of Royal Artillery or to Brigade Depôts.

271. Surgical means for Veterinary purposes will be issued in the proportions specified at page 143.

SECTION XI.—MARKING EQUIPMENT.

I.—General Instructions.**II.—Marking Ordnance, Carriages, and Artillery Stores.**

- III.—** " **Arms.**
IV.— " **Accoutrements.**
V.— " **Musical Instruments.**
VI.— " **Harness and Saddlery.**
VII.— " **Squad Bags.**
VIII.— " **Brigade Depot Equipment.**

I.—General Instructions.

272. The tables printed at page 144 contain details of the descriptions and proportions of stamps supplied to all services for marking arms, accoutrements, harness, and saddlery. Stamps for marking.

273. With the exception of articles of equipment for man and horse, no stores issued for the service of the troops are to receive any indelible Corps marks which would render them unfit for re-issue. Should it be found on such articles being returned into store, that they have been so defaced, the cost of the articles will be charged against the Corps, for the use of which they were issued. Permanent marking limited.

274. With the exception of extra service accoutrements supplied to regiments and brigade dépôts in excess of their regulated strength, no articles of equipment supplied from time to time for temporary purposes will receive corps marks. When articles so supplied are no longer required, they will be returned to store as directed in paragraph 51. Articles temporarily supplied not to be marked.

275. The service of marking the equipment is performed by the paid artificers of the corps, as part of their duty, and no charge will be admitted for marking, except under the conditions contained in paragraph 298. Equipment marked by artificers.

276. The paint required for marking baggage (Queen's Regulations and Orders for the Army, 1873, sec. 16, § 23) may be purchased by Commanding Officers as required, the charge being supported by a certificate stating the number of packages marked. Marking baggage.

277. Branding irons will be supplied to all mounted Corps, and will be replaced, when worn out. A set will comprise the figures 0 to 8, with the respective Troop or Corps letters (*see tables, page 144*). Branding irons.

II.—Marking Ordnance, Carriages, and Artillery Stores.

278. All side arms, handspikes, levers, as well as the handles of all intrenching tools, and other articles required for manual Marking and painting handles of tools, &c.

SECT. XI.

MARKING EQUIPMENT.

MARKING ORDNANCE, CARRIAGES, AND ARTILLERY STORES—cont^d.

labour, will be left unpainted. When it is necessary to mark these articles, they will be lettered in paint, with the distinguishing marks of the Corps to which they respectively belong.

Marks included in reports.

279. The marks and numbers on stores of all kinds, and every kind of projectile and fuze, on the carriages and guns of Field Artillery, on the carriages provided for the armaments of works, as also on all carriages of the Engineer Train, and Army Service Corps, will be noted in all reports relating to the repair, alteration, and condemnation of such stores, in order that the date of manufacture may be readily ascertained.

Lettering Batteries of Royal Horse and Field Artillery.

280. The lettering of the carriages and wagons by the regimental artificers, belonging to Batteries of Royal Horse and Field Artillery, will be carried out in the manner indicated on the drawings issued to these services, viz:—

- Fig. I. G.S. Royal Artillery wagon, head board.
- " II. " " " " " tail board.
- " III. Perch of ammunition wagon, wrought-iron.
- " IV. Trail of W.I. gun carriage.
- " V. Limber of ammunition wagon, and limber box.
- " VI. Ammunition boxes, except those on wagon limbers.

Marking Army Service Corps wagons and carts.

281. The following instructions, in regard to the mode of marking the wagons and carts in charge of the Army Service Corps will be observed:—

All letters and figures will be of the same size, viz., $1\frac{1}{2}'' + \frac{3}{8}''$.

In order to ensure uniformity in the lettering, stencil plates will be issued on demand.

A set of plates consists of the following, viz:—

9 plates, 1 roman figure on each }

1	2	3	4	5	6	7	8	0
---	---	---	---	---	---	---	---	---

For 9 use the 6 reversed.

3 plates, 1 roman letter on each -

A	S	C
---	---	---

Total, 12 plates per set.

The drawings issued illustrate the position of the letters on the various vehicles:—

- Fig. I. G.S. wagon, Mark II., tail board.
- " II. " " " " " head board.
- " III. Transport spring and tip cart, head and tail board.
- " IV. G.S. wagon with springs, Mark I., heavy, or light, tail board.
- " V. G.S. wagon with springs, Mark I., heavy, or light, head board.
- Mark VI. Water cart.
- " VII. Bread and meat wagon, tail board.

MARKING EQUIPMENT.

SECT. XI.

MARKING ORDNANCE, CARRIAGES, AND ARTILLERY STORES—cont^d.

Mark VIII. Bread and meat wagon, head board.

„ IX. G.S. wagon, Mark I., tail board.

„ X. „ „ „ head board.

The number on the left of the A. S. C. in the drawings, distinguishes the Company; the number below, the consecutive number of the cart or wagon.

III.—Marking Arms.

282. All arms are issued to the troops marked with the date of the year of issue, fire-arms being marked on the back side of the flat part of the butt end of the stocks. Arms.
Marks before
issue.

283. Extra service arms will further be stamped before issue, on the butt, with the distinguishing letter of the store depôt or station making the supply, and with consecutive numbers. They will receive no corps marks. Extra service
arms.

284. Rifles, carbines, pistols, swords, sword-scabbards, and lances, supplied for the regular Equipment of Corps, will be further marked when received by the troops, with consecutive numbers from one upwards, according to strength of establishment, together with the distinctive marks of the Corps to which the arms are respectively supplied. Marking after
issue.

285. The marking on arms and parts of arms are not to be engraved but stamped, and for this purpose the steel stamps detailed in pages 144, 145, will be supplied. The following examples illustrate the application of these marks :— Arms not to be
engraved.
Steel stamps.

- 1/G.G. - 1st Batt. Grenadier Guards.
- 2/C.G. - 2nd Batt. Coldstream Guards.
- 1/S.F.G. - 1st Batt. Scots Fusilier Guards.
- 2/4 - 2nd Batt. 4th Foot.
- B.D.23/ - 23rd Brigade Depôt.
- 1/R.B. - 1st Batt. Rifle Brigade.
- R.D.51/ - 51st, or Rifle, Depôt.
- 1/W.I. - 1st West India Regiment.

286. The Corps marks will be stamped on the arms as follows :— Position of
Corps marks
on arms.

(a.) On carbines and pistols; on the heel-plate.

(b.) On rifles; on the butt between the manufacturing mark, now on the butt, and the butt plate, and should be close to the former.

(c.) Bayonets, scabbards, and cleaning rods, will be marked with consecutive numbers only. The implements for the action will be stamped respectively with the numbers marked on the arms of the Non-Commissioned Officers to whom they are issued.

(d.) The numbers on the bayonet scabbards will be stamped on the button or stud, and not on the mouth-piece.

(e.) The sight protectors will be stamped on the cylindrical

SECT. XI.

MARKING EQUIPMENT.

MARKING ARMS—cont^d.

portion immediately above the sight guards, the form of the cylinder being kept perfect by means of an iron mandril supporting it inside, which can be furnished by the Armourer Serjeant.

(f) The jags will be carefully stamped on the iron part.

Hammer for stamping.

287. The 4-ounce riveting-hammer, supplied with the Armourer's forge, will be used with the stamps; a sharp, steady blow is all that is required.

Marking Royal Artillery arms.

288. Arms supplied to the Royal Artillery will be marked by Batteries, except in the Coast and Depôt Brigades, in the former they will be marked as for Battalions of Regiments, and in the latter by divisions instead of Batteries.

IV.—Marking Accoutrements.

Nature and position of marks.

289. All accoutrements will be marked by the Ordnance Store Department before issue with the year of issue. When received by the troops, they will be further marked, before being taken into use, to correspond with the arms. Articles that have been in use, and are re-issued, will be marked by the Ordnance Store Department with the letters P.W. (part worn), and the year of re-issue, in red ink. These marks will be carefully and legibly placed on the inside, or back part, of the belts, pouches, slings, and other articles.

Marking "extra-service" accoutrements.

290. Accoutrements supplied for men in excess of the regulated establishments will be marked by the Corps with consecutive numbers, and the distinguishing corps marks, valises being marked inside only. Such accoutrements when returned to store will be available for re-issue to any service as part-worn articles, and will be then further marked as directed in the preceding paragraph.

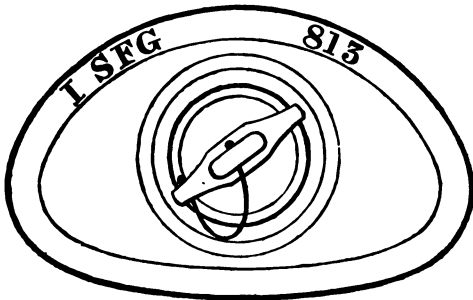
Stamps for marking.

291. Buff accoutrements will be marked with $\frac{1}{4}$ -inch metal stamps, and marking ink; accoutrements of brown or black leather with $\frac{1}{4}$ -inch iron stamps, care being taken that the leather is not cut, but merely bruised when being stamped. Branding the accoutrements is strictly prohibited.

Branding prohibited.

Marking water bottles.

292. The new pattern water bottles will not be painted or lettered. They will be marked on the upper edge in the manner shown in the subjoined woodcut.



MARKING EQUIPMENT.

SECT. XI.

MARKING ACCOUTREMENTS—cont^d.

293. In dismounted Corps the marking will be done with the stamps supplied for marking wood. In the case of the Mounted Services the water bottles will be stamped with the $\frac{1}{2}$ -inch stamps supplied for marking iron.

Dismounted and Mounted Services.

294. The straps for water bottles will be marked in the same manner as accoutrements.

Straps for water bottles.

295. Valises for all services will be provided with a leather shield furnished with brass figures or letters denoting the Corps for which the valises are supplied. The shield will slide upon the centre strap.

Marking valises.

296. The canvas inside the outer flap of the valise will be marked in marking ink with the same marks as the other accoutrements by means of the metal stamps supplied.

Marking valises.

297. No stamps will be supplied specially to mounted services for marking accoutrements, some of the stamps issued for marking the saddlery and harness being suitable for this purpose also.

Stamps not allowed to mounted services.

298. The under-mentioned allowances are granted for marking accoutrements under the conditions stated:—

Allowances for marking.

(a.) The sum of 9*d.* for every 300 water bottles, or straps for the same, issued to dismounted Corps.

Water bottles.

(b.) The sum of 2*s.* annually to each Regiment and Corps, and 1*s.* to each Brigade Depôt, for the purchase of marking ink, required for use with the metal stamps. (*See* paragraph 275.)

For marking ink.

(c.) The sum of 9*d.* for every 300 of the articles of valise equipment detailed below, in the case of Regiments or Corps receiving a new equipment, viz., ammunition bags, waist-belts, braces, white haversacks, pouches, straps, and the insides of the flaps of valises.

Valises; new equipments.

299. These allowances will be charged in the regimental pay lists, and will be vouched in each case by a certificate showing the number and description of articles marked, the date of their issue, and from what depôt.

To be charged in pay list.

V.—Marking Musical Instruments.

300. When the services of an Armourer Serjeant on the increased pay are not available, a charge of 3*d.* will be allowed for engraving each bugle, trumpet, and drum, and a charge of $\frac{1}{2}$ *d.* per letter or figure for flutes and piccolos, which will be engraved, not stamped, on the ivory top of each, in consecutive numbers, from one up to the number in possession, and also with the number of the regiment, battalion, or corps, thus $\frac{51 R}{2}$, $\frac{BD}{50}$.

Allowances for engraving the marks.

301. Azemar's silent drum for practice will be marked on the cloth on the under side, with the same stamps as are used for accoutrements.

Practice drum stamped.

SECT. XI.

MARKING EQUIPMENT.

VI.—Marking Harness and Saddlery.

Instructions for marking saddlery and harness. Order of marking. Stamping leather.

302. Saddlery and harness supplied to the mounted services, will be marked by batteries in the horse and field brigades, Royal Artillery, by troops in regiments of cavalry, and in the Engineer Train, and by companies in the Army Service Corps.

303. The leather work will be marked with $\frac{3}{16}$ -inch iron stamps immediately under the War Department store mark, care being taken that the leather is not cut, but merely bruised.

Stamping iron-work.

304. The iron work will be marked with $\frac{1}{2}$ -inch iron stamps, the portmouth bit in front of the port, the bridoon bit on top of the mouthpiece, and the stirrup irons on the bottom.

Marking sheep skins, &c.

305. Sheepskins, nose-bags, and corn sacks will be marked with $\frac{1}{4}$ -inch stamps immediately under the War Department store mark.

VII.—Marking Squad Bags.

Marking squad bags.

306. Each squad bag will be marked on the outside of the upper flap with the initial letter of the Company or Troop, the number or appellation of the Regiment, and the year in which the squad bag was first issued from the Quartermaster's stores.

The following will exemplify the mode of marking, viz. :—

A. 95 Rt.
1871.

F. 1/15 Rt.
1872.

D. 2/Gr. Gds.
1873.

B. 4 D. G.
1871.

Paint to be used.

307. Brown leather squad bags will be marked with black paint. The figures and capital letters will be $1\frac{1}{2}$ inches in length.

Allowance for marking.

308. The sum of fourpence for each squad bag so marked on first issue will be allowed; the amount will be charged in the accounts of the regiment, vouched by the usual receipt of the person who executed the work, and certified by the Officer Commanding.

VIII.—Marking Brigade Depot Equipment.

Marking of equipment of Brigade Depôts.

309. In Brigade Depôts the arms, accoutrements, musical instruments, and all articles enumerated as forming part of the equipment of a soldier, will be marked with the number of the Brigade Depot to which they belong, the letters B.D., being placed above the number of the Brigade Depot, and the consecutive number of the article below, thus $\frac{B.D.}{49}$ The

valises will not, however, be marked on the outside, but will be marked inside only, in the way laid down in paragraph 296.

**SECTION XII.—REPAIR AND PRESERVATION OF EQUIPMENT,
INCLUDING ARMAMENTS OF WORKS.**

I.—General Instructions.

II.—Preservation of Ordnance and Carriages.

III.—Repair of Arms.

IV.—Repair of Accoutrements.

V.—Repair and Preservation of Musical Instruments.

VI.—Repair of Saddlery and Harness.

VII.—Preservation of Squad Bags.

I.—General Instructions.

310. Commanding Officers will not allow or pay for the performance of any work connected with equipments or armaments for which there is no regulated allowance, without previous authority obtained at home, from the Secretary of State for War, and at foreign stations from the General or other Officer Commanding.

Unauthorised work prohibited.

311. All repairs and painting to field guns, carriages, wagons, harness, saddlery, camp equipment, and all stores, that can be performed by the regular regimental artificers, will be executed free of charge, by the armourers, collar makers, saddlers, saddle-tree makers, smiths, wheelers, and others, under the superintendence of Commanding Officers; the necessary tools being always in possession of the Corps, and materials being supplied by the public, except when money allowances are granted for their purchase.

General repairs executed without charge by regimental artificers.

312. The services of the regimental artificers will, when the duties of their own corps permit, be made generally available for performing any work which they may be called upon to execute within the limits of their trades, and during working hours, for other corps or detachments unprovided with artificers, or requiring the assistance of additional artificers under exceptional circumstances.

Employment of regimental artificers for other corps.

313. Repairs which cannot be executed by the regimental artificers, will be performed under the direction of the Ordnance Store Department by the artificers attached to that Department, or else in accordance with the directions given in paragraph 314.

Repairs by the Ordnance Store Department.

314. Whenever repairs, painting, or other services involving the expenditure of money in working pay or in payments to contractors, are required in connexion with the equipments of the service, a requisition will be made by the Officer Commanding the Corps concerned on the Senior Ordnance Store Officer, stating the nature of the work required, and the cost at which it could be carried out by military tradesmen receiving the authorised rates of working pay, or by local contract. (*See* paragraph 254.)

Working pay and payments to contractors.

315. The Officer making the requisition will then be informed of the manner in which the service should be performed; and, should it be decided to employ military tradesmen, he will, on the

How authorised.

SECT. XII.

REPAIR OF EQUIPMENT.

GENERAL INSTRUCTIONS—cont^d.

completion of the service, certify on the original requisition that the work has been efficiently carried out.

Requisition certified.

316. The requisition so certified, will then be attached to the working pay list as a voucher in support of payment.

Materials for repair may not be sold.

317. No materials supplied for the repair and preservation of equipments may be sold or exchanged for others, or used on any equipments but those for which they were demanded; nor will any purchase of materials, by Officers Commanding Corps, be sanctioned by General Officers Commanding, except in special cases.

Materials are not to be used for manufacture.

318. Materials supplied for repairing equipment are intended solely for carrying out repairs. They will not, except under special circumstances, be used for the manufacture of new articles.

II.—Preservation of Ordnance and Carriages.

Materials for preserving ordnance.

319. The proportions of stores allowed annually for the care and preservation of ordnance actually mounted on the defences, including the guns, carriages, platforms, sights, elevating screws, side-arms, and all articles appertaining to the service of such guns, are specified in the table printed at page 81. Regulations for the inspection and examination on service of rifled guns, with directions for their preservation, are printed in Appendix XVII.

Examination of rifled guns.

320. The details of the ingredients and stores allowed for each battery biennially for the browning of rifled muzzle loading 16 pounder and 9 pounder guns will be found printed at page 83. Instructions for browning are printed in Appendix VII. The articles will be demanded on the 1st March or 1st September, except the earthenware pan, which may be procured locally by Officers Commanding batteries at a cost not exceeding 1s. The browning will be expected to last two years. If it should fail to last that period, the circumstances will be specially represented.

Browning field guns.

Lacquering bores of guns, and removing parts.

321. Except when practice is going on, the bores of all garrison guns will be kept lacquered, and in open works, all the parts that are removable, and the fittings of guns and carriages and platforms, will be kept under cover.

Lubricating axles and cogs.

322. Wrought-iron Carriages and Platforms when mounted on the defences, are to have the axles of their trucks and rollers lubricated with the same description of oil as has been adopted for the Hydraulic Buffers. The cog wheels of the traversing gear of platforms will be preserved with grease. Materials required for packing the buffers are detailed at page 79.

Packing for buffers.

III.—Repair of Arms.

Repair of interchangeable arms.

323. All the implements, stores, and chemical ingredients for browning interchangeable arms, as well as the materials for the repair of the same, are supplied at the public expense to Regi-

REPAIR OF EQUIPMENT.

SECT. XII.

REPAIR OF ARMS—cont^d.

ments and Corps provided with Armourer Serjeants. They will be held in charge of Commanding Officers, and a careful record of all receipts and expenditure will be kept in the regimental ledgers. Details of the stores supplied for repairing and browning arms are printed in pages 94 to 99. Instructions for cleaning Martini-Henry rifles are given in Appendix VIII. A list of parts and materials to be carefully packed when regiments proceed on foreign service is given in Appendix XV.

Browning arms.

Cleaning
Martini-Henry
rifles.

324. When materials are required for the repair of arms, Officers commanding companies will certify to the repair being required, and upon such certificate the issue will be made by the Quartermaster, and the Commanding Officer will satisfy himself that the repairs have been executed.

Requisitions
for and issue
of materials.

325. When the arms of a Corps or Detachment unprovided with an Armourer Serjeant require repair, browning, or marking, the Commanding Officer will make application to the Officer in command of the nearest corps provided with an Armourer Serjeant, to have the work performed, the necessary materials being obtained and accounted for by the Officer whose Armourer Serjeant is employed; if the services of a Regimental Armourer are not available, application will be made to the Commissary General to have the work performed.

Repair where
there is no
Armourer
Serjeant.

326. The sums to be levied against a Regiment or Corps provided with an Armourer Serjeant, on the return of arms into Store, will be for the cost of such repairs as ought to have been executed by that artificer. Any further expenses required to make the arms fit for re-issue for service, will be borne by the public. Under no circumstances will an Armourer Serjeant make any charge against the soldier for any work performed on the arms.

Liability of
Corps provided
with Armourer
Serjeant.

327. Bands will not be supplied for scabbards of cavalry swords. Scabbards so far worn as to require new bands will be condemned.

Scabbard
bands.

328. To enable the armourer to perform the service of browning the arms, he will be granted the assistance allowed, under the Royal Warrant of 27th December 1870, for the purpose, from the regiment; the men employed under his direction being allowed working pay.

Allowance to
assistants in
browning.

329. No charge will be made against the troops for browning their arms, when the browning is rendered necessary by fair wear.

Charge for
browning
discontinued.

IV.—Repair of Accoutrements.

330. The leather work of accoutrements will be repaired in batteries of Garrison Brigades, Royal Artillery, in companies of Royal Engineers, in regiments of Infantry, and other dismounted corps, by the regimental shoemaker, or such other person as may be named by the Commanding Officer. For this service the

Leather work.

Allowance in
dismounted
Corps.

SECT. XII.

REPAIR OF EQUIPMENT.

REPAIR OF ACCOUTREMENTS—cont^d.

Valise equip-
ment.
Metal work.
Mounted
Corps.
Brigade
Depôts.

sum of 10s. per Company or Battery will be allowed yearly to each Commanding Officer, the waxed thread and tools being provided out of this allowance, and all other materials being supplied by the Ordnance Store Department. In the case of Companies having valise equipments this allowance will be increased to 12 shillings. The repair of the metal work will be part of the ordinary duty of the Armourer Serjeant. In mounted corps the repairs will be executed by the artificers free of charge.

331. In the case of Brigade Depôts the allowance for the repair of accoutrements will be 20 shillings, and will commence from the date on which the Brigade Depôt is formed, and the Captains of the line companies composing the Brigade Depôt will cease to draw any allowance with the Regiment or Battalion, for the repair of accoutrements from that date.

Supply of
materials
chargeable to
the public.

332. Spare parts and furniture for accoutrements, required to replace others expended or worn out, the cost of which is chargeable to the public, will be supplied to Regiments or Corps in the authorised proportions, as detailed in pages 100 to 105.

To troops.

333. Supply will likewise be made of such materials as are required to replace others lost, or damaged by neglect, and their value will be charged against the troops.

Exchange of
unserviceable
portions.

334. When any article comprising two or more component parts, which can be separately obtained from store, has become in part unserviceable in time of peace, the serviceable portions will be retained, and attached by the artificers of corps, free of charge, to the new parts received from store, to replace the unserviceable.

Large requisitions.

335. In cases, however, where the requisitions for accoutrements to replace unserviceable articles are very large, and where Commanding Officers consider that it would be inexpedient to allow the equipments of their corps to be rendered incomplete, even for a short time, accoutrements of the kind referred to in the preceding paragraph, may be demanded in a complete state. Moreover, on all occasions, Commanding Officers will take care that no article of the equipment in use is ripped to pieces, until the new parts required from store have been received, and can be sewn on without delay.

No ripping to
pieces until
new parts
received.

V.—Repair and Preservation of Musical Instruments.

Drums and
bugle strings.

336. The stoppages chargeable against drummers, trumpeters, and buglers, for the repair of drums and for bugle strings are laid down in article 27 of the Royal Warrant dated 20th September 1873. [Clause 126, Army Circulars, 1873.]

Brass side
drums.

337. Detailed instructions, for the guidance of Drum Majors, respecting the management and preservation of brass side drums, are printed in Appendix IX.

REPAIR OF EQUIPMENT.

SECT. XII.

VI.—Repair of Saddlery and Harness.

338. The authorised proportions of materials, as detailed in pages 110–117, which are supplied for repairs of saddlery and harness, are based upon the average quantities required for the repair of articles which have been some years in use. With new equipments the same amount of materials would not be required; and Commanding Officers, in making requisition, will demand only what is actually requisite.

Materials for repairs.

339. The repair of harness and saddlery belonging to the Head Quarters of Horse and Field Brigades Royal Artillery will be effected by the artificers of the nearest battery.

Royal Horse and Field Artillery.

340. All cuttings from the under-mentioned materials supplied to the mounted services for repairing saddlery and harness, as well as the unserviceable parts and material named, will be returned into store, as convenient opportunity offers:—

Disposal of cuttings.

Cuttings, from {
 canvas.
 cloth.
 leather.
 numnah.
 serge.
 sheepskins.

Flaps, saddle, pairs.

Hair, old {
 doe's.
 horse.

Junk, old.

Metal-work {
 brass, bosses { bits.
 cruppers and breastplates.
 copper, rivets, saddles, universal.
 iron (from saddles generally). ;

Seats, saddlery.

VII.—Preservation of Squad Bags.

341. Regiments supplied with squad bags made of brown leather will be allowed, for the purpose of preserving the leather, half-a-pound of dubbing for each bag annually. The dubbing required will be drawn on the 1st March in each year.

Squad bags.

SECTION XIII.—DURATION OF EQUIPMENT.

I.—General Instructions.**II.—Duration of Arms and Accoutrements.****III.—Duration of Saddlery and Harness.****I.—General Instructions.**

Reference to
tables.

342. Periods of duration for arms, as well as for all descriptions of accoutrements and other stores issued to the regular troops, have been assigned for ordinary circumstances, and are given in this section. The articles detailed in the Tables will be exchanged after the periods mentioned, if they shall have become unserviceable, on requisition being made in accordance with these Regulations. Articles not mentioned in the Tables are expected to last under ordinary circumstances 12 years.

Duration on
active service
and at foreign
stations.

343. On active service and at foreign stations the periods of duration are liable to vary according to the climate and the nature of the service, but the prescribed periods will be kept in view, and adhered to as far as practicable.

II.—Duration of Arms and Accoutrements.

Unlimited
duration of
interchange-
able arms.

344. Since all arms of interchangeable pattern, are capable of being kept in a serviceable condition for a very considerable period, by the substitution of new parts for such as show wear, it is considered unnecessary to assign any period of duration to such arms.

DURATION OF EQUIPMENT.

SECT. XIII.

DURATION OF ARMS AND ACCOUTREMENTS—cont^d.

345.—ACCOUTREMENTS to which Periods of Duration are assigned according to the Corps for which they are issued.

Accoutrements which depend upon the Corps that has them in use.

Articles.	Duration. Years.	Corps.
Axe , helved, felling 4½ lbs. -	20	Cavalry.
Bags , ammunition valise equipments.	9	All services receiving them.
Belts { pouch - { Staff Ser- { jeants. } { Other ranks } { Staff Ser- { jeants. } { Other ranks } waist for sword carriages. } waist, for frogs	12	Cavalry.
	8	Others corps receiving them.
	12	All services receiving them.
	9	Cavalry.
	8	Other corps receiving them.
Billets { Sword carriages for { Sabretache slings	9	Cavalry and Army Service corps.
	12	Engineer train.
Braces , complete, for N. P. valise equipment.	9	Rifle regiments and Army Service corps.
Bugles , with strings -	12	Other corps receiving them.
Carriages , sword, for waist belts.	4	Lancers.
Cases , pioneers -	6	Other corps receiving them.
Frogs , sliding -	6	Hussars.
Haversacks -	9	Rifle regiments.
Knots , sword -	12	Other corps receiving them.
Pouches , ammunition -	4	Cavalry, Horse and Field Artillery.
	6	Other corps receiving them.
Sabretaches -	9	Lancers.
Slings { Carbine or rifle { Sabretache	6	Other corps receiving them.
	6	Hussars.
Trumpets , with strings	6	Dismounted Artillery.
Valises -	4	Other corps receiving them.
	6	All services receiving them.

346. Under ordinary circumstances the period of duration of the following will be as shown:—

Equipment of a general nature.

Articles.	Years.	Articles.	Years.
Bags , squad, leather -	10	Pistol , with rammers -	8
Bottles , wood, water -	*	Protectors , sight -	8
Cords , drum -	$\frac{9}{12}$	Rods , cleaning -	8
Drums -	10	Scabbards , leather, bayonet -	6
Flags , lance -	2	Scabbards , leather, sword and sword bayonet.	8
Flutes and cases -	9	Sticks , drum -	10
Forge , armourers', with tools -	20†	Stoppers , muzzle -	8
Leathers , snap cap -	1		
Pickers , hoof -	3		

Sect. XIII.

DURATION OF EQUIPMENT.

III.—Duration of Saddlery and Harness.

Harness and
saddlery.

347. The periods of duration of all articles of saddlery, harness, and horse appointments for home service, will under ordinary circumstances, be as stated below:—

Nose bags, corn bags, and corn sacks are expected to last the periods prescribed for them respectively, when the troops are in permanent stables only. On other occasions the time these articles will last will depend on the nature of the service and the station.

Articles.	Years.	Articles.	Years.
Bags { corn - - -	8	Pannels, { luggage and	7
{ nose - - -	3	{ drivers' - - -	
Bands, back and belly - - -	7	{ saddle { officers' and uni-	8
Bearer's, trace - - -	7	{ versal. - - -	
Bits { bridoon - - -	12	Pieces, buckling - - -	7
{ portmouth - - -	16	{ bearing, leading, and	5
Breastpieces, leather - - -	7	Reins { bridoon. - - -	
Breastplates - - -	7	{ bridle and side - - -	7
Breechings - - -	7	{ driving - - -	6†
Brushes { harness, hard - - -	1	Sacks, corn - - -	5
{ horse - - -	1	Saddles - - -	12
Buckets { carbine - - -	7	Scissors - - -	5
{ lance - - -	5	Skins { lamb, officers' - - -	7
Cases, horse-shoe - - -	7	{ sheep { N.-C. officers	6
Collars { head- { N.C. officers	4	{ and men. - - -	
{ stall { officers - - -	7	{ drivers' - - -	7
{ neck - - -	7	Sponges - - -	1
Combs, curry - - -	1	Straps { back - - -	7§
Cruppers - - -	7	{ all kinds (except kicking) - - -	7
Girths { leather - - -	7	{ kicking - - -	10
{ web - - -	3	Surcingle's - - -	7
Hames - - -	16	{ lasso - - -	10
Heads, bridle - - -	7	Traces { lead and wheel, and	7
Irons, stirrup - - -	16	{ breast harness. - - -	
Lassoos, see Traces.		{ short - - -	10
Leathers, stirrup - - -	7	Tugs, back-band and breast	7
Leggings - - -	7	{ harness. - - -	
Mumnahs - - -	3	Valises, officers' - - -	10
		Wallets { with holsters - - -	7
		{ without holsters - - -	7
		Whips, { drivers' - - -	5
		{ long - - -	4§

* No definite period can be fixed.

† Except the "screw-plates" and taps, which will be renewed every five years, if required, at the public expense, on requisition.

‡ Army Service Corps for driving from a box.

§ Army Service Corps.

PART 2.—DETAILS OF EQUIPMENT.

Garrison
Service.

I.—ROYAL ARTILLERY.

1. Garrison Service.
2. Field and Mountain Service.
3. Siege Train.

EQUIPMENT OF 12½, 12 (35 or 25 ton), 11, 10, 9, and 7-inch
Rifled M.L. Guns.

The proportions of ammunition given in the following Table have been assigned on the assumption that guns of this description will be placed only on sea defences approachable by iron-clad vessels; that the occasions where their fire might be required to aid in the land defence would be exceptional; that they might be opposed to wooden as well as to iron ships; and that they would always be associated with lighter ordnance, capable of maintaining a rapid fire, and suitable for repelling the landing of troops within short ranges. (See paragraph 102.)

The following tables are divided to accord with the sections in the Vocabulary of Stores.

Articles.	Proportions.	Remarks.
<i>Instruments.</i>		
Clinometers - -	as required - -	Measuring angles of slopes.
Telescope, draw, army signalling.	1 per work, from which a flag is displayed by regulation, and which commands a range of over a mile.	
<i>Tools.</i>		
Bars, crow, 6 feet - -	1 per battery - -	Act as powerful levers.
Hammers, claw, large	2 per battery - -	For all ordnance.
Horns, powder, miners'* -	1 per battery - -	For priming guns if required.
Spanner, McMahon's, 15" -	1 per battery - -	} For all ordnance.
Tools, smith's, in chest, sets	1 per battery - -	
<i>Miscellaneous Stores.</i>		
Brushes, water, carriage -	1 per gun - -	For cleaning the sponge.
Cordage, white, bolt, fms. -	According to gun†	For the running back gear.
Handspikes, common, 7 feet	2 per gun - -	Not to exceed 12 per work.

* Contains 1½ lbs. of F. G. gunpowder.

† 35-ton guns take 12 fms. 3½-inch rope, 25-ton gun 13 fms. 3-inch, and 18 and 13-ton guns 10 fms. 3-inch rope.

NOTE.—As regards the proportion "per district" throughout these Tables, see paragraph 109.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF M.L. RIFLED GUNS—cont^d.

Articles.	Proportions.	Remarks.
Jacks, hydraulic* { 10 tons - 20 ,, -	3 per district - 2 per command † -	Capable of raising 10 tons. For guns of 25 tons and over.
<i>Ordnance.</i>		
Axletrees, wrought iron transporting, with linch- pins and washers.	1 per district for 12 or 11; 1 for 10-in.; do. for 9 and do. for 7-in. guns.	For moving gun carriages and traversing platforms. The 7-inch axletree is also suitable for 9-inch single plate carriages.
Bags { canvas, instrument extracting projec- tiles.	1 per instrument -	Used in transport to cover the head.
serge { common or double shell. Palliser shell.	1 per common and double shell. 1 per Palliser shell -	} To contain the bursting charge.
Barrows { lamp, with three trays. powder, covered truck, transport- ing shot and shell.	1 per work. 1 ,, ,, 1 per gun over 7-inch -	
Bearers { shot or shell - wood for cartridge cylinders.	1 per gun under 10-inch 2 per gun over 9-inch -	Used in loading. For carrying cylinders.
Boards, { range - scale -	According to position. 2 per wharf where there are cranes.	For landing projectiles.
Boxes, { grease, $\frac{1}{2}$ round - tin { tube, garrison, large	1 to 3 guns. 1 per gun, and 10 per cent. spare.	
Brushes, gun, Piasaba, with stave.	1 per nature of gun per battery from which practice is carried on.	For cleaning out the grooves.
Buckets, sponge -	Part of platform.	
Cans, tin, oil, lubricating -	1 to 4 guns -	Globular can with fine spout.
Caps, sponge -	1 per sponge -	On the sponges.
Carriages, complete { wrought-iron, sliding double-plated brack- ets. drug, ‡ gun, with trucks, 25 tons.	1 per gun and 5 per cent. spare. 1 per district or station, according to extent.	For dwarf or casemate traversing platforms. Capable of moving guns up to 25 tons.
§ Cart- ridges, { battering charge - full charge -	1 per Palliser projectile. 1 per common or double shell, and case shot.	} For the number to be kept filled, see paragraph 111.

* Water mixed with methylated spirits, in the proportion of two parts of the former to one of the latter, will be used with these jacks. The jacks when once filled will be kept so whether in use or in store; the capacity of the 20 ton jack is $3\frac{1}{2}$ pints, and of the 10 ton jack 2 pints. These jacks will be cleaned out from time to time and if not used will be worked occasionally to keep the packing in good order.

† Say the Island of Malta or the Southern District.

‡ Drugs are specially intended for confined localities where the sling wagon could not be used, they would not therefore *both* be supplied except in extensive and important districts. They will in all cases be made the subject of special requisition.

§ Silk cloth cartridges will be supplied for charges of 85 lbs. and upwards; flannel for lower natures until the store is used up.

ROYAL ARTILLERY.

I.

EQUIPMENT OF M.L. RIFLED GUNS—cont^d.

Garrison Service.

Articles.	Proportions.	Remarks.
Carts , shot or trench -	1 per work over 3 guns	For moving heavy projectiles.
Clippers , portfire -	1 per battery for all ordnance.	To cut lighted portfires.
Fids , muzzle -	1 per battery per calibre	Used in slinging guns.
Fuzes { percussion, Pettman (general service).	1 per common and double shell.	
Gauges , iron, ring, shot or shell, body and studs.	1 per district, per calibre.	
Gun-powder { service { P.* - - lbs. } L.G. or R.L.C. ,, shell, L.G. - - }	Sufficient to fill shells, and cartridges supplied empty.	For all battering charges and full charges of 40 lbs. and upwards. Full charges under 40 lbs. Bursters of shells.
Gyns , triangle, iron, { heavy† 18 ft., complete - { light†			1 per battery; or 3 per district if more than 2 batteries.	Heavy, for 12-ton guns and under. Light, for 7-ton guns and under, of all natures.
Heads , { rammer - - spare. { sponge - - }	1 per 2 guns.	
Hooks , cam, copper, joined with rope.	1 pair per landing place where there are cranes.	
Instruments , extracting projectiles.	1 per battery of each kind required and 2 spare per district.	
Lanterns , fighting -	2 per casemate -	1 lb. of candles (same as for magazine lamp) for each lantern, not for use in peace without authority.
Lanyards , friction tube, garrison, with loops.	3 per gun - -	Of tarred line, 12 feet long.
Lever , wood { iron-pointed { heavy, guns 25 tons and over light, under 25 tons - - } iron shod { 5-foot, platform 7-foot, crow -	1 per 18 feet heavy iron gyn.	To lift the prypole.
	2 per gun, 1 spare per battery.	Serve to elevate gun or run out carriage.‡
	2 per casemate platform, if fitted with traversing gear 2 per work.	Used in traversing the platform.
	1 per work - -	

* R.L.G. can be used for the battering charges of 7, 8, and 9 inch guns, where pebble powder is not available. Service L.G. may also be used in case of necessity for the guns named.

† Complete with 1 gyn tackle, 1 erecting do. (except for Mark II. gyns), 4 windlass levers with ropes, 3 wood trucks, 3 slings of 9-inch rope (16, 7, and 3 feet long), and lashing for short slings. A gyn tackle consists of 18 fathoms of 5-inch white bolt (or hawser-laid) rope, with 2 treble 15-inch Bothway blocks. An erecting tackle consists of 7 fathoms of 2½-inch white rope, with 1 single 8-inch Admiralty block; it is employed to raise the gyn tackle to the head of the gyn. For the splay allowed for the prypole of these gyns, see Appendix VI.

‡ Complete with one gyn tackle, 4 levers (2 of which with ropes), 3 wood trucks, and 2 slings of 6-inch white rope. The gyn tackle consists of 18 fathoms of 4 inch white bolt rope, with 2 treble 12-inch Bothway blocks.

§ Also used to traverse the dwarf platform when fitted with rear trucks furnished with holes in the circumference to receive the lever-point.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF M.L. RIFLED GUNS—cont^d.

Articles.	Proportions.	Remarks.
Limber , with wheels -	1 per district - -	For transporting axletree.
Limstocks , with cocks -	1 per battery for all ordnance.	For holding lighted slow match.
Match , slow - lbs.	1 per 100 rounds.	
Measures , graduated -	1 per work - -	For filling the cylinders of hydraulic buffers.
Ordnance , wrought iron, rifled, M.L. complete.*	As required.	
Pans , for oil - -	Part of platform, fitted with hydraulic buffers.	
Planks , rolling projectiles -	1 per 3 guns or under, for 9-inch guns and over	For rolling projectiles on.
Platforms , wrought iron, traversing. { case-mate. dwarf	{ According to description of work.	{ The hydraulic cylinder holds 12 gallons of mineral oil.
Plugs , vent, Hayes' pattern -	1 per gun - -	To protect the vents of mounted guns.
Portfires , common - -	4 to 100 rounds of ammunition.	
Prickers , priming-iron, 23-in.	2 per gun.	
Rammers , with staves -	2 per gun - -	One for use, and one spare.
{ drag, heavy, pairs	1 per district - -	2 if over 10 traversing platforms.†
Ropes {	guide rammer with clips.	2 per rammer above 9-in. 2 per 12-in. carriage -
	preventor - -	1 per other carriage when not fitted with traversing and running back gear -
		2 per gun, and 10 per cent spare.
Servers , vent, with lanyard‡		Used in action.
Shells , with plugs.§	common - -	12, 11, and 10-inch 20 per 100.
		9-inch 31 per 100 -
	double, 7-inch -	7-inch 26 per 100 -
		5 per 100 - -
Palliser|| -	12-inch of 25 tons, and 10-inch, 42 per 100.	Fuze hole plugs—1 per shell except Palliser.
	12-inch of 35 tons, and 11-inch, 77 per 100.	Base-plugs—1 per Palliser projectile.
	9 and 7 inch 32 per 100	Unloading hole plugs and wads—1 in each common and double shell, made prior to January 1873.

* With 2 tangent, 2 trunnion, 1 centre hind, and 1 centre fore sight; 1 socket for centre hind sight, 2 moveable clamps for tangent sights; 2 pivot-pieces complete; and in guns adapted also to naval service, 2 preserving screws for friction-tube pin, and 1 preserving screw for lanyard guide-plate. The 12" gun of 35 cwt. has a third tangent scale with clamp instead of the centre hind sight and socket. A pivot piece "complete" comprises:—1 elevating plate, 1 pivot and 1 keep-pin secured to the gun by 4 fixing screws. These fixing screws are replaced by preserving screws in transport.

† These articles are for general use, and are supplied according to the number of traversing platforms of all natures of ordnance in a district.

‡ Whpcord should be demanded separately for making the lanyards.

§ The plugs and wads which close the unloading holes of common and double shells are never to be removed, unless it becomes necessary to withdraw the charge from a shell, in the fuze hole of which a percussion fuze has become fixed and cannot be taken out without risk of explosion. See List of Changes, Cl. 2426, abolishing unloading holes in shells after January 1873.

|| The 12-inch gun of 35 tons, and the 11-inch gun, have only one Palliser projectile namely, a shell, of which 77 per 100 rounds of ammunition will be supplied.

ROYAL ARTILLERY.

I.

EQUIPMENT OF M.L. RIFLED GUNS—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.
Shot { case - - -	12, 11, and 10 inch 3 per 100.	} Batteries situated behind others more advanced, or further than 300 yards in-shore will be supplied with additional Palliser shell in lieu of case.
{ Palliser, cored - - -	9 and 7-inch 5 per 100	
	12-inch of 25 tons, and 10-inch, 35 per 100.	
Slings , for 10 to 12 inch projectiles.	9 and 7-inch 32 per 100 3 per landing place.	
Spanners , { for gland nut - hydraulic { for plug and buffer. { cock.	1 per work or battery - 2 per work - - -	To release piston rod. To remove screw plug, when necessary to insert the measure.
Spikes , common - - -	2 per gun - - -	For spiking vents permanently.
Sponges , with staves - - -	2 ,, - - -	One for use, and one spare.
Sticks , portfire - - -	2 per battery - - -	To hold lighted portfires.
Strap , tube box - - -	1 per tube-box - - -	Worn round the waist.
Straps , metal, cylinders, sets	1 per éxpense magazine for removing lids of cylinders.	For 9 and 7-inch cylinders mark I. only, in cold and temperate climates.
Tackle , loading sets. { for derricks - - -	1 per 11-inch gun - - -	1 treble and 1 double block with hooks, and 10 fms. 2½" white rope.
	1 per 10 ,, ,, - - -	1 double and 1 single block with hooks, and 7½ fms. 2" white rope.
	1 per 11 ,, ,, - - -	treble block with shackle, remainder as above.
	1 per 10 ,, ,, - - -	double block with shackle, remainder as above.
{ for shields - - -	1 per 9 ,, ,, - - -	
Tackles , gun, white, double sets, complete.*	1 per platform when not fitted with traversing gear, if so fitted 1 per battery.	For traversing the platform and running the gun back at drill, where there is no running back gear.
Tampeons , wood - - -	1 per gun, and 1 spare to 6 guns.	For the muzzle; to protect the bore.
Trays , lamp - - -	See Barrows.	
Tubes , friction, copper, service, long.	1 per round, and 10 per cent. spare.	
Wadhooks , with staves - - -	1 to 3 guns - - -	For drawing charge and searching the bore.
Wads , wedge - - -	1 per round. - - -	Placed in front of the projectile to prevent its shifting.
Wagons , sling, iron, heavy, with break, complete.	1 per district - - -	Capable of moving 12-ton guns. See note † at page 60.
Wheels , transporting platform.	1 pair per district - - -	For the transporting axle-tree.
Wrenches { knock-up, general service. fixing elevating rack.	1 per work, 2 if over 10 traversing platforms. †	For tightening nuts.
	1 per battery - - -	For securing the elevating racks to the gun.

* A set consists of 16 fathoms of 3-inch white rope, with 1 double and 1 treble 9-inch Admiralty blocks.

† These articles are for general use, and are supplied according to the number of traversing platforms of all natures of ordnance in a district.

I.

ROYAL ARTILLERY.

Garrison Service.

FOR EXCEPTIONAL POSITIONS.

Forts and batteries in exceptional positions, such as those on the Thames and Medway, have special proportions of ammunition allotted to them as follows:—

Ammunition.	Flanking Fire up or down the River.	Direct Fire.
Shell { common - -	20	10
{ Palliser - -	42	50
Shot { case - -	6	—
{ Palliser - -	32	40

EQUIPMENT of M.L. Rifled Converted Guns 80-prs. of 5 tons, and 64-prs. of 58 cwt., calibre 6·3-inch.

Articles.	Proportions.	Remarks.	
<i>Tools.</i>			
Hammers , claw, large -	2 per battery.		
Horns , powder, miners'* -	1 per battery -	For priming guns if required.	
Spanners , McMahan's, 15-in.	1 „		
<i>Miscellaneous Stores.</i>			
Hand-spikes , { common, { 6 ft. {	2 per sliding carriage,	} 64-prs. only. } 80-prs. and 64-prs. } 80-prs. only.	
	5 „ common „		
	2 „ rear chock „		
	2 „ sliding „		
	5 „ common „		
} 7 ft. {			
<i>Ordnance.</i>			
Axletrees , wrought-iron transporting, with linchpins and washers.	1 per district -	For moving gun carriages and traversing platforms. These articles, as well as their limbers and wheels, are available also for the B.L. rifled and S.B. ordnance.	
Bags , canvas instrument, extracting projectile.	1 per instrument -	Used in transport to cover the head.	
Bearer s, shot or shell -	1 per gun -	80-prs. only, used for loading.	
Boxes , { grease, half round-tin { tube, garrison, small	1 per 3 guns.	For friction tubes.	
	1 per gun, and 10 per cent., spare.		
Brushes , gun Piasaba, with stave.	1 per battery from which practice is carried on.	For cleaning out the grooves.	
Buckets , wood sponge -	1 per 2 guns -	For damping the sponge.	
Cans , tin, oil, lubricating -	1 per 6 guns -	Globular can with finespout.	
Caps , sponge -	1 per sponge -	On the sponge.	
Carriages , { iron, or wood common† -	} 1 per gun, according to description of work.	} 80-prs. sliding only.	
			{ sliding or -
			{ rear chock -
Cartridges , flannel { 10 lbs.	} 1 per round of ammunition.	} 80-pr. guns. } 64 „	
{ 8 lbs.			
Cases , leather, cartridge -	2 per gun -	To bring filled cartridges to gun in action.	
Clippers , portfire -	-	See page 61.	

* Contains 1½ lbs. of F.G. gunpowder.

† To be fitted with Allen's breaks.

ROYAL ARTILLERY.

I.

EQUIPMENT OF 80 AND 64-PR. RIFLED CONVERTED GUNS—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.	
Fids , wood, muzzle -	1 per battery, same as 32-pr.	Used in slinging guns.	
Flanges , iron spare -	1 to 20 traversing platforms.	For the trucks.	
Fuzes *	percussion { Pettman, G.S. - { R.L. -	Land Fronts. Sea Fronts. — 60 60 —	{ For common shell. At home stations a limited proportion only is supplied in time of peace.
	time, { 5 Sec. - wood, M.L. { and -		
	{ 9 Sec. -		
Gauges , iron, ring, shot, or shell.	1 per district.		
Gun-powder	service { L.G. or R.L.G. lbs. pistol or { F.G. lbs.	Sufficient to fill cartridges and shells supplied empty.	{ For cartridges. " bursters shrapnel shell. " " except shrapnel.
	shell, L.G. -		
Guns , triangle, 18 feet light complete.	See page 61.		
Hand-spikes	metal roller, 7 feet	2 per sliding carriage -	{ To run the gun out.
	wood roller, 6 feet	1 per rear chock carriage.	
Heads , spare { rammer - { sponge -	1 per 2 guns.		
Implements , fuze, sets †	1 per gun -		For preparing fuzes (see detail below).
Instruments , extracting projectiles.	1 per battery.		
Lanyards , friction tube, garrison, plain.	3 per gun -		Of tarred line.
Lever s, wood, { crow, 7 feet, iron shod. { platform, 4 feet.	1 per 3 guns.	2 per gun on sliding carriage.	For traversing the platform.
Limber , with wheels -	See page 62.		
Linstocks , with cocks -			
Match , slow - - lbs.			
Ordnance , cast-iron converted M.L. rifled guns.	As required -		Complete with the fittings detailed below. †
Pedestals , wood -	1 per carriage -		To replace elevating screw when removed.
Platforms , wood, { casemate traversing. { dwarf -	1 per sliding carriage, according to description of work.		
Plugs , vent, Haye's pattern	1 per gun -		To protect the vent.
Portfires , common -	4 per 100 rounds.		
Prickers , vent, garrison	1 per gun -		To prick the cartridge.
Primers , shrapnel shell	1 per Shrapnel shell.		
Rammers , with staves §	2 per gun, same as 32 pr.		1 for use, and 1 spare.

* Per 100 rounds.

† To be demanded as implements, parts of:—

A set of implements, fuze, consists of:—	Cylinder, wood, common -	1
Bag, canvas { cylinder, wood, common -	Instructions, printed sheets, to	
{ hook borer -	every 2 guns -	1
Bits, hook borer -	Key, iron, fuze, and plug,	
Borer, hook, with handle -	general service -	1

‡ For each 80-pr. and 64-pr. 71 cwt.; 2 tangent sights with 2 clamps, 2 trunnion sights with 2 metal brackets; and two fixing screws for each bracket. For each 64-pr. 58 cwt.; 1 centre fore sight, and one centre hind sight, each with a socket. These articles are issued packed in cases. *Preserving screws* are placed in the holes for the fixing screws of the brackets in transport, and permanently in the holes made for the pin friction tube, and guide plate, both naval fittings not required for land service.

§ In supplying the 32-pr. rammers, sponges and wad-hooks for the 80-pr. gun, care must be taken that the staves are of sufficient length.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF 80 AND 64-PR. RIFLED CONVERTED GUNS—cont^d.

Articles.	Proportions.	Remarks.
Ropes { drag, heavy - pairs -	See page 62.	
preventor - - -	1 per sliding carriage -	To control the carriage.
Servers , vent, with lanyard*	2 per gun and 10 per cent. spare.	Used in action.
Shells , with { common -	60 per cent.	
plugs { shrapnel -	30 „	
Shot , case - - -	10 „	
Spikes , common - - -	2 per gun - - -	For spiking vents permanently.
Sponges , with staves -	2 per gun same as 32-pr.	1 spare.
Sticks , portfire - - -	2 per battery.	
Straps , tube box - - -	1 per box - - -	Worn round the waist.
Tackle , double, sets, { gun	1 per traversing plat-	For 80-prs. (<i>in future issues</i>).
complete.† { luff	form.	
Tampeons - - - - -	1 per gun, same as 32-pr.	To protect the bore.
Trucks , hollow soled, spare	1 to 20 traversing plat-	For traversing platforms.
	forms.	
Tubes , friction, copper, service short.	1 per round, and 10 per cent. spare.	Issued in cylinders containing 25 each.
Wad-hooks , with staves -	1 per 3 guns, 32-pr. -	For searching the bore.
Wads , wedge - - - -	1 per round, except for shrapnel shell.	Placed in front of the projectile to prevent its shifting.
Wagons , sling, wood, service complete.	1 per district, if necessary.	Available for the B.L. and smooth-bore ordnance.
Wheels , transporting platform.	1 pair per district -	For axletree transporting.
Wrenches { for sights -	1 per 10 guns.	For altering the flanges, &c.
cross-handled‡	1 per district - - -	
knock-up - - - -	See page 63.	

EQUIPMENT of 7-inch, and 40-pr. B.L. Rifled Guns.

Articles.	Proportions.	Remarks.
<i>Instruments.</i>		
Clinometer - - - -	See page 59.	
<i>Tools.</i>		
Files , 2nd cut, flat, safe-edge, 12-in.	1 per 2 7-inch guns -	For nose of vent-piece.
Hammers , claw, large -	2 per battery.	
Spanners , McMahon's 15" -	1 „	
<i>Miscellaneous Stores.</i>		
Hand-spikes { common, { 7 feet -	2 per 7-inch gun.	On sliding carriage.
{ bevelled { 6 „	{ 2 per 40-pr. - - -	
	{ 5 per 40-pr. - - -	
<i>Ordnance.</i>		
Axletrees , wrought iron, transporting, round, with linchpins and washers.	See page 64.	
Bearers , shot or shell -	1 per 7-inch gun only	For carrying projectiles.
Bits , vent, Armstrong -	1 to 4 guns - - -	Removes irregularities in vents.

* Whipcord should be demanded separately for making the lanyards.

† A set of tarred gun tackle consists of $12\frac{1}{2}$ fathoms of $2\frac{1}{2}$ -inch tarred rope, with 2 double 8-inch Admiralty blocks. A set of luff tackle consists of 10 fathoms of $2\frac{1}{2}$ -inch tarred rope with 1 single and 1 double 8-inch Admiralty blocks.

‡ Available also for B.L. Rifled and Smooth Bore Ordnance in the district.

ROYAL ARTILLERY.

I.

EQUIPMENT OF B.L. RIFLED GUNS—cont^d.

Garrison Service.

Articles.	Proportions.	Remarks.
Boxes , tin, { grease, } round { tube, } garrison, { small - -	1 to 3 guns. 1 per gun, and 10 per cent. spare.	For friction tubes.
Buckets , wood, sponge - -	1 per 2 guns - -	For damping the sponge.
Bushes spare { copper { vent piece, } sets { breech - - -	1 to 2 guns. 2 per 40-pr. gun.	
Caps , sponge - - -	1 per 7-inch gun. 1 per sponge - -	On the sponges.
Carriages , complete. { drug, gun - - -	1 per district or station, according to extent.	Suitable for all ordnance up to 5 tons.
{ iron, wrought, standing { standing, common { wood { sliding { casemate { dwarf	- - - - - - - - According to nature required.	} For 40-pr. guns only.
Cartridges , flannel, service charge.	1 per round of ammunition.	
Cases , leather cartridge - -	2 per gun - -	To bring filled cartridges to gun in action.
Clippers , portfire - -	See page 61.	
Coatings , sponge, spare - -	1 per 100 rounds of ammunition.	
Compressors , wood - -	As required.	
Covers , vent slot, or apron -	1 per gun - -	To protect vent slot and sights.
Cups , tin { 7-inch - - -	1 per round.	
{ 40-pr. - - -	- - - -	With practice ammunition only.*
Cylinders , paper - -	1 per round of ammunition.	Inside filled cartridges. Issued separate with empty cartridges.
Extractors , tin cup - -	1 per 7-inch gun only.	
Fids , breech and muzzle - -	1 of each per battery per calibre.	Required when the gun is slung.
Flanges , iron, spare - -	1 to 20 traversing platforms.	For the trucks.
Fuzes † { percussion, { Pettman's { Gen. service { R.L. - - -	Land Fronts. Sea Fronts. - - - 60 60 - -	For common shell.
{ †time, B.L. { 9 secs. - - -	30 30	} For common and segment shell.
{ ordnance { 20 „ - - -	20 20	
Gauges , shot or shell, ring, high.	1 per battery for each calibre.	For gauging the bases of the projectiles.
Gun-powder { service, L.G. or { R.L.G. lbs. { shell, L.G. „	Sufficient to fill shells and cartridges, supplied empty.	For cartridges.
Gyns , triangle, 18 feet, light, complete.	See page 61.	Bursters.
Handspikes , roller, metal, 7 ft.	2 per gun - -	On sliding carriage.
Implements , fuze, sets § -	1 per gun - -	For preparing fuzes.
Lanyards , friction tube, garrison, plain.	3 per gun - -	Of tarred line.

* For practice, cups are supplied at the rate of 1 per 10 rounds or less, according to requirement.

† Per 100 rounds.

‡ At home stations a limited proportion only is supplied in time of peace.

§ To be demanded as implements, parts of, see detail, p. 65.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF B.L. RIFLED GUNS—cont^d.

Articles.	Proportions.	Remarks.	
Lever { iron, releasing vent piece	1 per 7-inch gun only -	Required if the vent piece jams.	
	wood, iron shod. { crow, 7-feet	1 to 3 guns - - -	To draw bolts out of platforms, &c.
		platform, 4 ft.	2 per gun on sliding carriage.	For traversing the platform.
Limber , with wheels -	See p. 62.		
Linstocks , with cocks -	See p. 62.		
Lubricators -	1 per round of ammunition.	Issued separate for 7-inch guns, and with all <i>empty</i> cartridges; choked in the 40-pr. <i>filled</i> cartridges.	
Match , slow - lba.	1 per 100 rounds.		
Ordnance , wrought iron, rifled, B.L. screw } 7-inch or 40-pr.	As required - - -	Complete with 2 tangent, and 2 trunnion sights, 1 vent piece, and 1 breech screw complete.*	
Pedestals , wood - -	1 per carriage - -	To replace elevating screw when removed.	
Pieces , vent, spare, with preserving screws.	2 per gun - - -	Parts of the breech closing apparatus.	
Pins , spare, keep, lever -	1 per gun - - -		
Platforms , wood, { casemate traversing } dwarf -	According to description of works.	Supplied to guns on sliding carriages.	
Pockets , leather { tin-cup tube -	1 per 7-in. - - -	For tin cups.	
	1 per gun - - -	For vent-piece primers.	
Portfires , common -	4 to 100 rounds of ammunition.		
Primers , vent piece -	1 per round of ammunition and 10 per cent. spare.	Supplied in cylinders containing 25.	
Rammers , with staves -	2 per gun.		
Rings , copper, vent piece -	2 per 40-pr. gun.		
Ropes { drag, heavy pairs preventor -	See p. 62 - - -	For all ordnance. To control the gun in running up.	
	1 per gun on sliding carriage.		
Screws { spare { breech { 7-inch -	} 1 per station in reserve for 10 guns; 2 if over 10 guns.		
			40-pr. -
			fixing saddle -
preserving -	1 per 7-inch gun only.		
Shells with plugs { common † -	60 per cent. - - -	} <i>Plugs issued in the shells.</i> Fuze hole plugs, 1 per shell.	
	30 " - - -		

* Besides (7-inch 82 cwt.) 2 movable clamps for tangent sights, 1 metal saddle with screws, 1 friction tube pin preserving screw, and 1 guide plate ditto: (7-inch 72 cwt.) 2 metal sockets for tangent sights with set screws, 1 metal saddle with screws, and 1 friction tube pin preserving screw, (40-pr.) 2 movable clamps for tangent sights, 2 crutch preserving screws, and 1 guide plate ditto.

N.B.—The fittings of a breech screw consist of 1 lever with 2 keep pins, 1 indicator ring, and 1 tappet ring. The preserving screws for friction tube pin and crutch are in the 7-inch and 40-pr. vent pieces respectively, the guide plate preserving screw is in the metal of such guns as are fitted for naval as well as land service.

† The 7-inch common shell of 83 lbs. (*empty*) is not suitable for the 7-inch gun of 72 cwt.; the 96 lbs. (*empty*) shell must be demanded for this piece. Both shells are suitable for the 7-inch gun of 82 cwt.

ROYAL ARTILLERY.

I.

EQUIPMENT OF B.L. RIFLED GUNS—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.
Shot , case - - -	10 per cent.	
Sockets , wood, cartridge -	1 per. cartridge for 7-inch guns.	Choked in <i>filled</i> cartridges. Issued separate with <i>empty</i> cartridges.
Sponges , with staves -	2 per gun.	
Sticks , portfire - - -	2 per battery.	
Straps , tube box, or pocket	1 per box and pocket -	Worn round the waist.
Tackle , double sets, luff, tarred complete.*	1 per traversing platform.	
Tampons - - -	1 per gun, and 1 spare to 6 guns.	For the muzzle, to protect the bore.
Tools , { facing { 7-inch - } sets { 40-pr. - } { special B.L. guns - }	1 per district, and 1 in reserve.	
Trucks , hollow soled, with bolts, spare.	1 per battery.	
Trucks , hollow soled, with bolts, spare.	1 to 20 traversing platforms.	
Tubes , friction, copper, service, short.	1 per round, and 10 per cent. spare.	Issued in cylinders containing 25.
Wagons , sling, wood service, complete.	See p. 66 - - -	} Available for smooth-bored ordnance also.
Wheels , transporting platform.	See p. 66 - - -	
Wrenches { cross handled { knock-up -	See p. 66 - - - See p. 63 - - -	

EQUIPMENT of Cast-Iron Guns, Howitzers, and Carronades.

The following List is intended to guide the equipments of these classes of ordnance, on the assumption that guns command the approaches to works both by land and sea, while howitzers and carronades are, as a rule, confined to flanking defences.

Articles.	Proportions.	Remarks.
<i>Tools.</i>		
Hammers , claw, large -	2 per battery.	
Horns , powder, miners'† -	1 per battery - - -	For priming guns, if required.
Spanner , McMahon's 15 in.	1 per battery.	
<i>Miscellaneous Stores.</i>		
Handspikes { common, { bevelled, 6 ft. { (or 7 ft.)	{ 5 with a common carriage. { 2 with a sliding, rear chock, or carronade carriage.	} 7-ft handspikes are used with guns above 80 cwt. in weight, and all guns on rear chock carriages.

* For composition of set, see p. 66.

† Contains 1½ lbs. of F.G. gunpowder.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF CAST-IRON GUNS, HOWITZERS, AND CARRONADES—cont^d.

Articles.	Proportions.	Remarks.	
<i>Ordnance.</i>			
Apron, lead, large -	1 per howitzer -	Protects vent and tangent scale in transport.	
Axletrees, wrought iron, transporting, with linchpins and washers.	<i>See p. 64.</i>		
Bearers, shot, spherical, 8-in.	1 per 68-pr. gun -	To lift solid shot in loading.	
Bottoms, wood, common shell.	1 per common shell issued loose, and 10 per cent. spare.	Issued strung on iron rods holding 20.*	
Boxes, tin {	fuze, } common	For common fuzes.	
	for 10 } (black).		
	fuzes, } shrapnel		
with } (blue).	1 " " -	When diaphragm shrapnel fuzes are supplied.	
straps } plug and wad, rectangular.	1 to 5 guns supplied with diaphragm shrapnel shell.	For the papier mâché wads and spare loading-hole plugs of the shell.	
tube, garrison, small	1 per piece and 10 per cent. spare.	For copper friction tubes.	
Boxes, wood, shell {	No. 2 -	} Used to carry the shell to the muzzle of the piece in action.	
	" 3 -		
Buckets, wood, sponge -	1 per 2 pieces of ordnance.		
Cans, tin, oil, feeding, pint -	1 per 6 pieces.		
Caps, sponge -	1 per sponge -	On the sponges.	
Carriages, iron or wood (standing or sliding), complete.	1 per piece of ordnance, according to nature.	Also according to the description of work.	
Cartouches, leather, large -	1 per 4 guns when employed for salutes.		
Cartridges, flannel, service charge.	1 per round of ammunition.		
Cases, leather, cartridge -	2 per piece of ordnance	To bring filled cartridges to piece in action.	
Clippers, portfire -	<i>See p. 61.</i>		
Compressors, wood -	As required.		
Fids, wood, muzzle -	1 per battery per calibre	Required in slinging ordnance.	
Flanges, iron, spare -	1 to 20 traversing platforms.	For the trucks.	
Fuzes {	percussion, Pettman, L.S.	1 per 2 common shells	For common shells with "crossed" plugs.
	time, } common	1 to 2 common shells, and 10 per cent. spare.	} Each nature of fuze is issued in cylinders containing 5.
wood } shrapnel.	1 per diaphragm shrapnel and 10 per cent. spare.		
Garlands, iron, shot or shell, rectangular, in 4 pieces, without pins.†	According to circumstances.	To hold (generally) a pile of 30 shot or shells.	

* Issued riveted to other shells. The 8-inch and 32-pr. naval shell bottoms are strung on wood mandrils holding 20.

† Where it can be done, garlands should be made on the spot of stone or rod iron, or where practicable, beds should be made for the piles with spherical projectiles half sunk in the ground.

ROYAL ARTILLERY.

I.

EQUIPMENT OF CAST-IRON GUNS, HOWITZERS, AND CARRONADES—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.
Gauges , ring, iron, shot or shell, high.	1 per battery for each calibre.*	
Gun-powder { service { L.G. lbs. { pistol or { F.G. lbs. { shell, L.G. ,,	Sufficient to fill shells, and cartridges supplied empty.	For cannon cartridges. Bursters, diaphragm shell. Do. common shell.
Guns , triangle, 18 feet, light, complete.	See p. 61.	
Handspikes { roller { metal, { 7 ft. { wood, { 6 ft.	2 with a sliding carriage 1 with a rear chock carriage.	For running out the gun and carriage.
Implements , { No. 1 set shell and fuze, { set † -	1 per station, 2 if large station. 1 per 2 pieces - -	For rectifying fuze holes, if required. For preparing fuzes.
Lanyards , friction tube, garrison, plain.	2 per piece of ordnance	Of tarred line.
Lever , wood { crow, 7 ft. iron-shod. { platform, 4 ft.	1 to 3 guns. 2 per traversing platform.	For traversing the platform.
Limber , with wheels -	} See p. 62.	
Linestocks , with cocks -		
Match , slow - lbs.		
Ordnance , cast iron, smooth-bored (<i>guns, howitzers, and carronades</i>).	As required - -	Complete as detailed below. ‡
Pedestal , wood - -	1 per carriage.	
Pins , iron, garland - -	4 per square garland -	Unite sides of garland at corners.
Platforms , { casemate, wood traversing { common { iron { wood { dwarf, wood -	1 per casemate carriage 1 per 5½-in. howitzer - 1 per platform carriage 1 per dwarf carriage -	Sliding carriages. On iron truck carriage. Wood carriages on trucks. Sliding carriages.
Plugs , metal, loading hole, spare.	5 per cent. on supply of diaph. shrapnel shell.	Large or small, according to calibre. §
Plugs , vent, Hayes' pattern -	1 per piece of ordnance	To protect the vent.
Portfires , common - -	4 per 100 rounds.	
Prickers , vent - -	1 per piece of ordnance	To prick cartridge.
Rammers , with staves -	2 per gun || - -	1 for use and 1 spare.
Rivets , for shell bottoms -	1 per bottom issued loose.	
Ropes , { drag, heavy, pairs - { preventor - -	See p. 62. 1 per sliding carriage -	To control the carriage.
Screws , iron, { fixing, spare { sight preserving-	1 per gun. 4 ,, -	Used in transport only.

* High and low gauges are also supplied to stations of inspection.

† To be demanded as implements, parts of, see detail, p. 65. The printed instructions are not suitable for smooth-bore ordnance.

‡ With (*guns*) 1 hind and 1 fore sight, each with 2 fixing screws and lead packing and 1 wood tangent scale; (*howitzers*) 1 brass tangent scale, with set screws (*carronades*) 1 hind sight, with two fixing screws and lead packing, and 1 fore sight.

§ The large loading-hole plug is used with diaphragm shrapnel shell above the 18-pr.; the small plug with the 18-pr. and lower natures.

|| Rammers for howitzers and carronades are on the sponge staves.

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF CAST-IRON GUNS, HOWITZERS, AND CARRONADES—cont^d.

	Land Fronts.			Sea Fronts.				Flanks.
	Guns, 10-inch.	Guns, 8-inch.	Guns, 68, 56, 42, 32, 24, and 18-pr.	Guns, 10-inch.	Guns, 8-inch.	Guns, 68-pr.	Guns, 56, 42, 32, 24, and 18-pr.	10 and 8-in. Guns; 10, 8, 54-in. Howitzers and Carronades.
Shells, { common, prepared with for bottoms* - plugs { diaph. shrapnel, do. case and grape - solid, cast iron -	85	60	25	85	70	30	30	30
Shot {	—	25	15	—	15	10	10	—
	15	15	10	15	15	10	15	70
	—	—	50	—	—	50	45	—

} per 100 rounds.

* Naval shells can also be issued for land service. They are furnished with special wood bottoms attached by two copper rivets, and are fitted with an adapter, to take the Pettman G.S. percussion fuze, and the Boxer wood time fuzes for M.L. ordnance; which fuzes would be supplied with them, in the proportions laid down above for common shell, the number of 9 secs. fuzes being double that of 20 secs. fuzes.

Articles.	Proportions.	Remarks.
Spikes { common - spring -	- 2 per piece of ordnance - 1 do. do. when required†	To spike vents permanently. Do. temporarily.
Sponges, with staves	- 2 per piece of ordnance	1 for use, and 1 spare.
Sticks, portfire	- 2 per battery.	
Strap, fuze or tube box	- 1 per box	- Worn round the waist.
Tackle, { gun, tarred double sets, complete.‡ { luff ,,	- } 1 per traversing platform.	{ For 68-pr. guns (<i>in future issues</i>). { For lighter pieces.
Tampons -	- 1 per gun or howitzer	- To protect the bore.
Trucks, hollow soled, spare	1 to 20 traversing platforms.	For traversing platforms.
Tubes, friction, copper, service, short.	1 per round, and 10 per cent. spare.	Issued in cylinders containing 25.
Wadhooks, with staves	- 1 to 3 pieces of ordnance.§	For drawing charges, and searching the bore.

† Spring spikes are to be demanded only for pieces in advanced or exposed works.

‡ For composition of a set of each, *see* p. 66.

§ And 6 spare to each district in which salutes are fired, for the use of the saluting guns. If additional wadhooks are required for drill, the service wadhooks must be collected.

ROYAL ARTILLERY.

I.

EQUIPMENT OF CAST-IRON GUNS, HOWITZERS, AND CARRONADES—cont^dGarrison
Service.

Articles.	Proportions.	Remarks.
Wads { grummet - -	According to circum- stances.*	For fuze holes. Large or small according to calibre.†
{ papier { common -	1 per common shell -	
{ maché { diaph.shrap. loading-hole	1 per diaphragm shrap- nel and 5 per cent.spare.	
Wagon , sling, wood, service, complete.	See p. 66.	
Wheels , transporting plat- form.	See p. 66.	
Wrenches {	for sights -	1 to 10 guns or howit- zers.
	cross handled -	See p. 66.
	knock-up -	See p. 63.

* The proportion depends on locality, and is left to the discretion of officers commanding R.A. In positions where guns would generally be fired with a slight elevation the proportions required would be small; where guns are likely to be depressed a grummet wad would be required for each solid shot, or plugged shell used as hollow shot.

† The large loading-hole wad is used with diaphragm shrapnel shell above the 18-pr.; the small wad with the 18-pr. and lower natures.

EQUIPMENT of 13, 10, and 8-inch Cast-Iron Mortars.

Articles.	Proportions.	Remarks.
<i>Instruments.</i>		
Quadrants , brass, with level	1 per battery.	
<i>Tools.</i>		
Cord for striking-lines, or lines chalk.	6-yards per mortar -	Used in pointing mortars.
Hammers , claw, large -	2 per battery.	
Lines , striking, for mortar -	See cord.	
Spanners , McMahon's, 15 in.	1 per battery.	
Horns , powder, miners' †	1 per battery -	For priming if required.
<i>Miscellaneous Stores.</i>		
Chalk - - lbs.	1 to 2 mortars -	Used in pointing mortars.
Handspikes , com- { 6 feet -	4 per L.S. mortar -	For serving the mortar.
	mon, bevelled { 7 ,, -		4 per 13-in.S.S.mortar }
<i>Ordnance.</i>		
Beds , complete {	iron -	Complete, with 2 cap squares and coin. Including coin, derrick, tra- versing levers, and pin- tail, complete.
	wood -		1 per 13-inch S.S. mortar
Bolts , metal, for india-rubber rings.	20 per 13-inch S.S. ,,	Issued with deck complete

† Holds 1½ lbs. of F.G. gunpowder.

E. W.

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I. ROYAL ARTILLERY.

EQUIPMENT OF CAST-IRON MORTARS—cont^d.

Garrison Service.

Articles.	Proportions.	Remarks.
Boxes , tin, tube, garrison, small.	1 per mortar, and 10 per cent. spare.	
Buckets , wood, sponge	1 per 2 mortars.	
Caps , { muzzle - -	1 per mortar in use* -	To protect the bore. On the sponge.
canvas { sponge - -	1 per sponge - -	
Cartridges , flannel, charge	1 per round of ammunition.	
Carts , trench - -	1 to 10 13-inch mortars when required.	
Cases , leather, cartridge	2 per mortar - -	To bring filled cartridges to mortar in action.
Clippers , portfire - -	See p. 61.	
Coins , wood - -	1 per mortar bed - -	To give 45° elevation. Issued with bed complete.†
Deck , wood, octagonal complete.	1 per 13-inch S.S. mortar	Complete, with 20 metal bolts and 21 india-rubber rings.
Derrick , iron, loading, shell	1 per 13-inch S.S. mortar	Issued with the bed. Complete, with single block, fall, and pair of shell hooks.
Fids , wood - - - -	1 per battery per calibre	Used in sling mortars.
Fuzes , wood, mortar, large	1 per mortar shell, and 10 per cent. spare.	8 inches long; burns 30 seconds.
Garlands , iron, shell, rectangular, in 4 pieces, without pins.	According to circumstances.	{ To hold a pile of 30 shells. See note, p. 70.
Gauges , ring, iron, shell, high.	1 per battery per calibre	
Gunpowder { service, L.G. lbs.	{ Sufficient to fill shells and cartridges issued empty. See p. 61.	} For cartridges. For bursting charges.
{ shell, L.G. lbs.		
Gyns , triangle, 18-feet, light, complete.	See p. 61.	
Heads , sponge, spare - -	1 per 2 mortars.	
Hooks , { beam - pair	1 per 13-inch mortar -	For lifting the shells.
{ hand - "	1 per 10-inch " -	
{ shell { derrick - "	1 per 13-inch S.S. mortar	Supplied with the derrick.
{ No. 1 set -	Proportion as stated at p. 65.	Common to all S.B. ordnance.
Implements , shell and fuze, { set - -	1 to 2 mortars - -	For preparing fuzes.
garrison. { extractors, fuze, large.	To be specially demanded.	
Lanyards , friction tube, garrison, plain.	3 per mortar - -	Of tarred line.
Lever s, traversing { wood -	1 per 13-inch S.S. mortar	} Issued with the bed complete.
{ iron -	1 " " -	
Linstocks , with cocks -	See p. 62.	
Match , slow - lbs. }		
Ordnance , cast-iron, smooth-bore (mortars).	As required.	

* Mortars not in use for practice or drill do not require caps. They can be laid horizontal with the caps removed.
 † Coins for 15° and 17° are also sometimes provided.
 ‡ To be demanded as Implements, parts of. A set consists of 6 mortar bits in a wood cylinder and bag, 1 brace, and 1 mallet.

ROYAL ARTILLERY.

I.

EQUIPMENT OF CAST-IRON MORTARS—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.
Perpendiculars , brass, with spirit level, in mahogany case.	1 per battery - -	To find highest point of mortar, when platform is not level.
Pins , iron, garland - -	4 per square garland -	Unite sides of garland at corners.
Pintails , iron, with nut -	1 per 13-inch S.S. mortar bed.	Complete, with 2 india-rubber rings and 3 metal washers (<i>with the bed</i>).
Platforms or frames, wood	1 per 13-inch S.S. mortar	To support the deck.
Plugs , vent, Hayes' pattern -	1 per mortar - -	To protect the vent.
Plummets , lead, with line -	1 " " - -	Used in pointing mortars.
Portfires , common - -	4 per 100 rounds.	
Prickers , vent - -	1 per mortar - -	To prick cartridges.
Rings , { 11" diameter, 3" thick	1 per 13-inch S.S. mortar	} Issued with deck complete.
india- { 7" " 3" "	20 " " - -	
rubber. { 7" " 1½" "	2 " " - -	
Rods , pointing, with plank -	2 rods and 1 plank per mortar.	Used in pointing mortars.
Shells , mortar - -	100 per cent. - -	These shells have no plugs, the fuze holes are corked.
Skins , sheep - pieces	1 per mortar - -	To wipe shell when loading.
Spikes , gun, common -	2 per mortar.	
Sponges , with staves -	2 " " - -	The same size for the 13 inch and 10-inch.
Sticks , portfire - -	2 per battery.	
Straps , tube-box - -	1 per box - -	Worn round the waist.
Tackle , luff, tarred, double sets, complete. (<i>See p. 66.</i>)	1 per 13-inch S.S. mortar	For the traversing lever.
Tubes , friction, copper, service short.	1 per round, and 10 per cent. spare.	Issued in cylinders containing 25.
Washers , metal, for pintail	3 per 13-inch S.S. mortar	Issued with pintail complete.
Wrench , iron, pintail -	1 " " - -	To tighten pintail nut.*

* An operation necessary after about every 10 rounds.

EQUIPMENT of 5½ and 4½-inch Bronze Mortars.

Articles.	Proportions.	Remarks.
<i>Instruments.</i>		
Quadrants , brass, with level	1 per battery.	
<i>Tools.</i>		
Cord , for striking lines, or lines, chalk.	6 yards per mortar -	Used in pointing mortars.
Hammers , claw, large -	2 per battery.	
Spanners , McMahon's, 15 in.	1 " "	
<i>Miscellaneous Stores.</i>		
Chalk - - lbs.	1 to 2 mortars - -	Used in pointing mortars.
Handspikes , common, bevelled, 6 feet.	2 per mortar - -	For serving the mortar.

F 2

I.

ROYAL ARTILLERY.

Garrison
Service.EQUIPMENT OF BRONZE MORTARS—cont^d.

Articles.	Proportions.	Remarks.
<i>Ordnance.</i>		
Beds , wood, complete -	1 per mortar.	
Boxes , tin, tube, garrison, small.	1 per mortar, and 10 per cent. spare.	For copper friction tubes.
Buckets , wood, sponge -	1 per 2 mortars.	
Cartridges , flannel, service charge.	1 per round of ammunition.	
Cases leather, cartridge -	2 per mortar - -	To bring filled cartridges to mortar in action.
Clippers , portfire -	See p. 61.	
Funnels , leather, copper spout, common, small.	1 per mortar - -	For filling shell.
Fuzes , { common - - } wood, { mortar, small * - }	{ 1 to 4, 5½-in. shell - 9 " 10, 4¾ " - 3 " 4, 5½ " - 1 " 10, 4¾ " - }	{ And 10 per cent. spare.
Garlands , iron, shell, rectangular, in 4 pieces, without pins.	According to requirement.	To hold a pile of 30 shells each. See note, p. 70.
Gun- powder { service L. G. - } { shell, L. G. - }	{ Sufficient to fill shells and cartridges issued empty.	For cartridges.
Heads , sponge, spare -	1 per 2 mortars.	For bursting charges.
Implements , { No. 1 set - } fuze and shell, { set - - }	{ Proportion as stated at p. 71.	Common to all S.B. ordnance.
Lanyards , friction tube, garrison, plain.	2 per mortar - -	See p. 65 for detail and mode of demanding.† Of tarred line.
Linstocks , with cocks -	As required.	
Match , slow - lbs. }		
Ordnance , bronze, smooth-bore (<i>mortars</i>).		
Pins , iron, garland - -	4 per square garland -	Unite sides of square garlands at corners.
Plummets , lead, with lines -	1 per mortar - -	Used in pointing mortars.
Portfires , common - -	4 per 100 rounds.	
Pricker - - - -	1 per mortar - -	To prick cartridges.
Rods , pointing, with plank -	2 rods and 1 plank per mortar.	Used in pointing mortars placed under cover.
Shells , common‡ - -	100 per cent. - -	{ 24 pr. shells for 5½-in. mortar. 12 pr. shells for 4¾-in. mortar.
Spikes , gun, common -	2 per mortar - -	For disabling ordnance.
Sponges , with staves -	2 per mortar - -	1 for use and 1 spare.
Sticks , portfire - -	2 per battery - -	To hold lighted portfires.
Straps , tube box - -	1 per tube box - -	Worn round the waist.
Tubes , friction, copper, service, short	1 per round and 10 per cent. spare.	Issued in cylinders containing 25.

* The small mortar fuze when used in 4¾-inch shells must be secured in the fuze hole (which is of larger diameter than the fuze) by means of tow or other substance, wound round it, to form a packing.

† The printed instructions not required.

‡ Shells for these mortars must be carefully gauged in the pieces themselves, which are of exceptionally small calibre.

I.

ROYAL ARTILLERY.

Garrison Service.

MAGAZINE STORES—CONT^d.

Articles.	Proportions.	Remarks.		
<i>Ordnance.</i>				
Barrels,* gun ammunition -	In proportion to the cartridges to be filled.	Where cartridge filling rooms are damp, metal-lined cases are used instead.		
Barrows, { truck, transporting R.M.L. projectiles, magazine, single -	2 per shell filling room	7-inch B.L. and M.L.E. guns and upwards.		
Blocks, wood, or shell holder	1 per main magazine -	R.M.L. guns only.		
Cage, metal, lifting cylinders	1 per work -	To be made locally.		
Cases,* wood, metal-lined -	1 per cartridge lift -	R.M.L. guns only.		
	In proportion to cartridges to be filled.	Keys for these cases are charged separate.		
Clips, projectiles, pairs -	2 per shell lift -	R.M.L. guns only.		
Cylinders,† zinc -	57 battering and 18 service per gun at home, and 77 battering and 23 service abroad. The <i>service</i> charges of the 7-in. gun being two in each cylinder, only half the number of cylinders to be supplied for those charges.	R.M.L. guns of 7-inch and upwards.		
Funnels, copper	{ cartridge	3 per cartridge filling room.	For filling cartridge.	
	{ shell, large	1 per shell filling room, 7-inch R.M.L. gun and upwards.	For use with the brass rods, for filling shells.	
Gauges, filled cartridge	{ brass, ring -	1. per cartridge filling room for each calibre.	Except for mortars and carronades.	
	{ wood, lengths -	1 per cartridge filling room for rifled guns.	To gauge the length.	
Implements, shell and fuze.	sets {	No. 2 -	1 per shell filling room	For spherical shells only, for fixing bottoms.
		„ 3 -	Do. do.	Do. for filling shells.
	parts of {	drivers, screw, diaph., large. extractors, fuze, small. funnels, common, large. holder's Palliser shell.	1 per shell filling room	† Rifled B.L. guns, 80 and 64 prs. only.
		instructions, sheets.	2 per shell filling room	Where rifled shell are filled.
		keys, iron, fuze and plug, general service.	2 per shell filling room	† Rifled guns only.
		wrenches, removing, plugs.	1 per shell room for Palliser shells only.	For removing base plugs of Palliser shells.

* Zinc cylinders are employed instead for the filled cartridges of 12, 11, 10, 9, and 7 inch M.L. rifled guns.

† Zinc cylinders are intended for use in magazines, and are not to be employed in the transport of filled cartridges, except between the guns and the magazine.

‡ Provided for in Set No. 3 for smooth-bore guns.

ROYAL ARTILLERY.

I.

MAGAZINE STORES—cont^d.Garrison
Service.

Articles.	Proportions.	Remarks.
Keys , for metal lined-cases -	3 per cartridge filling room.	If cases are supplied which require their use.
Magazine , portable -	According to circumstances.	Where there are no expense magazines; but metal-lined cases serve the same purpose.
Plates , stencil, "filled" and "bag."	1 per shell filling room	For marking filled shell.
Rods , brass, filling shell -	1 per shell filling room, 7-inch R.M.L. gun and upwards.	For use with the Funnels, shell.
Ropes , with hooks and counter weights.	1 per cartridge lift R. M. L. guns.	To lift cages; the hooks, thimbles, counter weights, and 2-inch cordage required are to be demanded separately, and made up locally, according to length required.
Scrapers , copper, shell -	As required - - - For works in which cartridge and shell stores have entrances and passages	To search interior of shells.
Shoes , magazine, pairs.	per cartridge store*	<i>in common.</i>
	„ shell store -	1 per gun it supplies -
	„ cartridge lift -	Do. - - -
	„ shell lift -	2 per lift - - -
	„ for gunners on duty -	Do. - - -
	„ magazines -	2 per 5 guns - - -
Straps , metal, sets -	According to size of magazine.	<i>distinct and apart.</i> 1 per gun it supplies.
Straps , metal, sets -	1 for each nature of zinc cylinder	2 per lift.
Tackles † and slings, for shell filling rooms.	2 per 5 guns - - -	2 per 5 guns.
	According to size of magazine.	According to size of magazine.
	1 for each nature of zinc cylinder	Opening zinc cylinders of the first pattern only for 7 and 9 inch R. M. L. guns.
	1 per shell filling room	R. M. L. guns only.

* For expense cartridge stores, or recesses where the issue is made from the outside, no magazine shoes are supplied.

† Consisting of two 8-inch Admiralty blocks, and 14 fathoms of 2½-inch white rope.

MATERIALS for packing HYDRAULIC BUFFERS.

Referred to in paragraph 322.

Articles.	First Supply for each Buffer.	Annual Supply for Five Buffers.
Cement, Scott's - - - - lbs.	1	1
Hemp - - - - - ozs.	2	2
Oakum - - - - - „	1	1
Tallow - - - - - „	1	1
Oil, linseed, boiled - - - pints	7	7

I.

ROYAL ARTILLERY.

Garrison Service.

Table of WORSTED, SILK TWIST, and THREAD, required for filling and completing 100 cartridges.

Nature of Cartridge.	Worsted, white, No. 14, for Serge Cartridges.	Silk Twist for Silk Cloth Cartridges.	Remarks.
MUZZLE LOADING.			
	Ounces.	Ozs. drs.	
12·5-inch - - - lbs.	—	—	
12-inch { 110 - - - "	—	1 4	
12-inch { 85 or 67 - - - "	—	1 4	
12-inch { 55 or 50 - - - "	5½	1 4	
11-inch { 85 or 70 - - - "	—	1 4	
11-inch { 60 or 50 - - - "	4½	1 4	
11-inch { 70 or 60 - - - "	4½	1 4	
10 inch { 44 or 40 - - - "	4½	1 4	
10 inch { 50 or 43 - - - "	4	1 3	
9-inch { 30 - - - "	4	1 3	
9-inch { 15 - - - "	4	1 1	
8 inch { gun { 35 or 30 - - - "	4	1 3	
8 inch { gun { 20 - - - "	4	1 1	
8 inch { gun { 12 - - - "	4	1 1	
8 inch { howit-zer { 10 - - - "	3½	0 9½	
8 inch { howit-zer { 5 - - - "	3½	0 9½	
8 inch { howit-zer { 2½ - - - "	3½	0 9½	
7-inch { 30 or 22 - - - "	3½	1 3	
7-inch { 14 - - - "	3½	1 1	
7-inch { 10 - - - "	3½	0 9½	
7-inch, 80, 64, or 30-pr. 10	16½	—	
80 or 64-pr. 10	3½	0 9½	
80 or 64, or 32-pr. 5	—	0 9½	
64-pr. { 12 - - - "	3½	0 9½	
64-pr. { 8 - - - "	3½	0 9½	
64-pr. { 6 - - - "	3½	0 9½	
64-pr. { 8 - - - "	16½	—	
64 or 32-pr. { 6 - - - "	8½	—	
40-pr. 7 - - - - "	3½	0 8	
25-pr. 4 - - - - "	2½	0 7½	
16-pr. { 3 - - - - "	2½	0 7½	
16-pr. { 1½ - - - - "	—	0 7½	
16-pr. { 1¼ - - - - "	2	0 7	
9-pr. { 1½ - - - - "	2	0 7	
9-pr. { 1 - - - - "	—	0 7	
7-pr. { 12 - - - Ounces.	1¼	0 7	
7-pr. { 8 - - - - "	1¼	0 7	
7-pr. { 6 - - - - "	1¼	0 7	
7-pr. { 4 - - - - "	1¼	—	
BREECH-LOADING.			
7-inch { 11 - - - lbs.	—	—	
7-inch { 10 - - - - "	—	—	
7-inch { 7 - - - - "	3½	—	
40-pr. { S.S. 5 - - - - "	—	—	
40-pr. { L.S. 5 - - - - "	—	—	1½
40-pr. { 3 - - - - "	2½	—	1½
20-pr. { 2½ - - - - "	—	—	—
20-pr. { 1½ - - - - "	—	—	—
12-pr. 1½ - - - - "	—	—	1½
12 or 9-pr. 1 - - - - "	4	—	—
12 or 9-pr. 1 - - - - "	—	—	1½
6-pr. { 12 - - - Ounces.	—	—	1
6-pr. { 10 - - - - "	2	—	—
			Thread, 3 cord, for serge cartridges. ozs.

Cartridges utilized or converted from smooth-bore 32-pr. of 10 lbs. and upwards.

32-pr. of 8 lbs. and upwards.
32-pr. or 24-pr. of 6 lbs. and upwards.

Thread, 3 cord, for serge cartridges. ozs.

ROYAL ARTILLERY.

I.

Stores for preservation of Armaments, supplied in accordance with paragraph 319.

Garrison
Service.

Articles.	Rifled Guns.	Cast-iron Ordnance.
Bricks, Bath - -	1 to 5 guns - -	1 to 20 pieces of ordnance.
Cloths, sponge - -	8 for each gun - -	1 to 10 " "
Composition greasing - -	1 lb. to 7-inch and $\frac{1}{4}$ -lb. to 40-pr. B.L. guns when not in use - -	} Nil.
	For platforms fitted with traversing gear only, 4 lbs. each; platform in open batteries; 2 lbs. each under cover - -	
Grease, Fenner's - -		} Nil.
	3 lb. for each B.L. gun - -	
Hemp, undressed - -	1 lb. to 5 guns. - -	Nil.
Oakum - -	1 quart for B.L. guns if in use, 1 pint if not in use - -	1 lb. to 20 pieces of ordnance.
Oil {	Lucca - -	} Nil.
	Mineral - -	
	Rangoon - -	} Nil.
	Sweet - -	
Wax, bees' - -	As required for lubricating shell plugs - -	1 pt. for 10 pieces of ordnance.
		} Nil.

2. FIELD AND MOUNTAIN SERVICE.

FIELD SERVICE.

WAR ESTABLISHMENT.

RIFLED BREECH-LOADING GUN BATTERIES.

Referred to in paragraph 124.

Field
Service.

Detail of Equipment.	Battery of Position. 40-pr.	Heavy Battery. 20-pr.	Field.	
			12-pr.	9-pr.
Guns, rifled - - - - <i>Ordnance.</i>	4	6	6	6
Carriages, wood, travelling, gun, complete.	4	6	6	6
Wagons {	ammunition, gun, limber - -	6	6	6
	forge and store - -	3	3	3
Total carriages - -	8	15	15	15

I. ROYAL ARTILLERY.

Field Service.

RIFLED BREECH-LOADING GUN BATTERIES—cont^d.

Detail of Equipment.	Battery of Position. 40-pr.	Heavy Battery. 20-pr.	Field.		
			12-pr.	9-pr.	
<i>Ammunition.</i>					
Gun {	limber of { gun - rounds	10	16	30	30
	{ wagon - " "	10	16	30	30
	axletree boxes - - " "	—	2	4	4
	wagon body - - " "	18	32	60	60
Total per {	battery - - " "	152	396	744	744
	gun - - " "	38	66	124	124
Harness, double sets {	lead - -	—	—	30	30
	wheel- - -	—	—	19	19
Saddlery, sets {	officers' - -	—	—	6	6
	universal - -	—	—	22	22
Artificers' tools. {	collarmakers' - sets	*	*	*	*
	facing - " "	1	1	1	1
	farriers' - " "	*	*	*	*
	smiths' - " "	*	*	*	*
	special - " "	1	1	1	1
	wheelers' - " "	*	*	*	*
Materials for repair {	collarmakers' -	} Sufficient for three months.			
	smiths' -				
	wheelers' -	} A fixed supply according to nature of carriage.			
Side arms, camp equipment, &c. -					
Stable necessaries - - -	} A fixed supply for each horse.				

* For the number of sets issued, see page 138.

Field and Mountain Service.

PEACE AND WAR ESTABLISHMENT.
RIFLED MUZZLE-LOADING GUN BATTERIES.
Referred to in paragraph 124.

Detail of Equipment.	R.H.A.		Field.				Mountain.	
	9-pr.		16-pr.		9-pr.		7-pr. 200 lbs.	
	Peace.	War.	Peace.	War.	Peace.	War.	War.	
<i>Ordnance.</i>								
Guns, rifled - - - -	6	6	6	6	6	6	6	
Carriages, iron, travelling, gun, complete.	6	6	6	6	6	6	6	
Wagons {	ammunition gun	2	6	6	6	6	—	
	limber.	1	1	1	1	1	—	
	forge - - -	—	1	—	1	—	1	—
	store - - -	—	1	—	1	—	1	—
	general service -	—	1	—	1	—	1	—
Total carriages -	9	15*	13	15	13	15	6	

* A battery attached to a Cavalry brigade would have a S.A. ammunition cart in addition. See para. 208.

ROYAL ARTILLERY.

I.

RIFLED MUZZLE-LOADING GUN BATTERIES—cont^d.

Detail of Equipment.	R.H.A.		Field.				Mountain.	
	9-pr.		16-pr.		9-pr.		7-pr. 200 lbs.	
	Peace.	War.	Peace.	War.	Peace.	War.	War.	
<i>Ammunition, &c.</i>								
Gun {	limber of { gun rounds	36	36	24	24	36	36	—
	axletree boxes - - "	36	36	24	24	36	36	—
	wagon body - - "	4	4	4	4	4	4	—
		72	72	48	48	72	72	—
Total per {	battery - - "	456	888	600	600	888	888	636
	gun - - "	76	148	100	100	148	148	106
Harness, double sets {	lead -	15	30	21	42	19	30	—
	wheel -	11	21	16	20	14	19	—
Saddlery, sets {	officers' -	—	—	6	6	6	6	—
	universal -	56	62	13	22	13	22	—
Saddles, pack, G. S., complete	ammunition and stores.	—	—	—	—	—	—	56
	carriages - -	—	—	—	—	—	—	13
	guns - -	—	—	—	—	—	—	12
	wheels - -	—	—	—	—	—	—	7
Artificers' tools	collarmakers' sets	*	*	*	*	*	*	1
	farriers' "	—	—	—	—	—	—	1
	smiths' "	*	*	*	*	*	*	—
	wheelers' "	*	*	*	*	*	*	—
Materials for repair	collarmakers' smiths' wheelers' -	Sufficient for 12 months in time of peace, and of three months in time of war.						
Side arms, camp equipment, &c.	A fixed supply, according to nature of carriages.							
Stable necessaries - -	A fixed supply for each horse.							

* For the number of sets of tools issued, see p. 138.

INGREDIENTS AND STORES FOR BROWNING FIELD GUNS.

Supplied in accordance with paragraph 320.

The following ingredients and stores will be allowed per battery biennially for the browning of rifled muzzle-loading 9 pr. guns:—

Acid, nitric - - -	ounces, 2	} To be mixed in 2 quarts of soft water.
Nitre, spirits of - - -	" 2	
Steel, tincture of - - -	" 4	
Vitriol, blue - - -	" 2	
Wine, methylated spirits of	" 3	
Acid, hydrochloric - - -	lbs., 6	Pail, wood, water, barrack - 1
Brush, shoe, hard - - -	1	Pan, earthenware, 6 quarts - 1
Card, scratch, on leather - -	inches, 6	Potash, American - - - lbs., 6
Cloth, sponge - - -	1	Soap, hard - - - " 1
Coal - - -	lbs., 336	Sponge, water, $\frac{3}{4}$ oz. - - 1
Oil, Lucca - - -	gill, $\frac{1}{2}$	

A Battery of 16-pr. guns is allowed half as much again of the above ingredients. 335 lbs. of coal will be allowed for each battery for carrying out the process of browning.

Field
and
Mountain
Service.

Field
Service.

I.

ROYAL ARTILLERY.

Field
Service.

GUN AND SMALL-ARM AMMUNITION RESERVES.

WAR ESTABLISHMENT.

Referred to in paragraphs 124 and 197.

Detail of Carriages and Equipment.	Divisional Reserve.	Army Corps or General Ammunition Reserve in Three Sections.		
		For each Section.	Total.	
<i>Ordnance.</i>				
Carriages, gun, spare { 16-pr. - - -	1	1	3	
{ 9 " - - -	1	1	3	
Carts, small arm - - - - -	29	—	—	
Wagons {	ammuni- { gun limber { 16-pr. - - -	4	—	—
	tion. { general service - - -	3	—	—
	{ 9 " - - -	13	29	87
	forage - - - - -	1	2	6
	store - - - - -	1	1	3
	rocket - - - - -	1	—	—
{ general service - - -	1	1	3	
Total - - - - -	55	35	105	
Rounds {	per gun { 16-pr. - - -	72	36	108
	{ 9 " - - -	108	15*	44
	per rifle - - - - -	40	14*	40
Total rounds carried {	16-pr. - - - - -	1,156	1,708	5,124
	9 " - - - - -	1,564	640	1,920
	rifle - - - - -	278,400	295,200	885,600
Harness, double sets {	lead - - - - -	50	35	105
	wheel - - - - -	65	45	135
Saddlery, sets {	officers' - - - - -	5	5	15
	universal - - - - -	16	16	48
Artificers' Tools {	collarmakers' sets - - -	†	†	†
	farriers' " - - - - -	†	†	†
	smiths' " - - - - -	†	†	†
	wheelers ² " - - - - -	†	†	†
Camp equipment and intrenching tools -	A fixed supply according to nature of carriage.			
Materials for repair { collarmakers' - - -	Sufficient for three months.			
{ smiths' - - - - -				
{ wheelers' - - - - -				
Stable necessities - - - - -	A fixed supply for each horse.			

* Exact proportions 14 $\frac{2}{3}$ and 13 $\frac{1}{3}$ respectively.

† For sets to be issued, see table on p. 138.

ROYAL ARTILLERY.

I.

3. SIEGE TRAIN.

WAR ESTABLISHMENT.

Referred to in paragraph 124.

Siege
Service.

A SIEGE TRAIN will consist of any number of units, composed of Heavy or Light Ordnance, according to the requirements of the Service, each unit consisting of the following guns with 500 rounds of ammunition per gun, and stores in proportion.

I. Detail of Ordnance, Beds, and Carriages for a Heavy Siege Train unit.

Description.		No.	Proportions and how mounted.	
Ordnance, rifled M.L., with sights	guns - { 64-pr., 64 cwt. - 40-pr., 35 cwt. - howitzers, 8-inch, 46 cwt. -	-	8	Siege travelling carriages and platform wagons. Siege travelling carriages. { Siege travelling carriages. { 7 also provided with beds.
		-	8	
		-	14	
Total ordnance		-	30	
<i>Beds and Carriages for Ordnance, complete.</i>				
Beds, howitzer, 8-inch	-	-	7	1 to 2 howitzers.
Carriages, iron, wrought, travelling, rifled M.L., siege with limbers -	gun - { 64-pr. - 40-pr. - howitzer, 8-inch	-	9	1 spare to 8 carriages.
		-	9	Do. do.
		-	15	1 spare to 14 carriages.
Total carriage, and beds		-	40	
<i>Carriages for Transport, complete.</i>				
Carts, trench	general service, R.A. pattern - platform -	-	15	1 to 2 pieces of ordnance.
		-	60	2 per piece of ordnance.
		-	12	1 per 64-pr. gun and 4 for guns and stores.
Wagons	sling* - with limbers { forge - store -	-	3	1 to 10 pieces of ordnance.
		-	3	1 to 10 pieces of ordnance.
		-	3	1 to 2 pieces of ordnance.
Total carts and wagons		-	96	

II. Detail of Ordnance and Carriages for a Light Siege Train unit.

Ordnance, rifled, M.L., with sights	guns - { 40-pr., 35 cwt. - 25-pr., 18 cwt. - howitzers, 6'3 inch, 18 cwt. -	-	10	} Siege travelling carriages.
		-	10	
		-	10	
Total ordnance		-	30	
<i>Carriages for Ordnance, complete.</i>				
Carriages, iron, wrought, travelling, rifled M.L., with limbers.	field and siege { gun - { 40-pr. - 25-pr. - howitzer, 6'3-inch	-	11	} 1 spare to 10 carriages.
		-	11	
		-	11	
Total carriages		-	33	
<i>Carriages for Transport, complete.</i>				
Carts, trench	general service, R.A. pattern - platform -	-	15	1 to 2 pieces of ordnance.
		-	60	2 per piece of ordnance.
		-	2	For guns and stores.
Wagons	with limbers { forge - store -	-	3	1 to 10 pieces of ordnance.
		-	3	1 to 2 pieces of ordnance.
		-	3	
Total carts and wagons		-	83	

With each of the above units will be associated—

Six 7-pr. R.M.L. guns of 200 lbs. on wrought-iron beds carried in general service wagons.

300 24-pr. Hale's rockets with 6 troughs, do. do. do.

Packing of Ammunition { All cartridges to be carried filled in metal-lined cases.
All shells are to be filled, and, together with the case shot, carried in wooden boxes.

* Complete with 4 levers (2 of which are fitted with ropes), 1 breech rope, 33 ft. long, of 2½ in. tarred rope, 1 sling 9 ft. long from bight to bight of 5 in. white rope, and 2 large and 2 small thumbies, in the case of the wood sling wagon. The light iron sling wagon has the same stores except that the sling is composed of a ¼-inch chain, 9 feet long.

**Field
Service.**

II. ROYAL ENGINEERS.

Details of Field Equipment.

Referred to in paragraph 130.

The following tables show—

- a. The details of a PONTON or Bridge Equipment Troop, conveying the Superstructure and Stores for 100 yards of bridge.
- b. The details of a FIELD Equipment Troop conveying the Stores and Field Equipment for Royal Engineers with an Army Corps.
- c. The details of a TELEGRAPH Equipment Troop conveying the Stores for one unit of advanced Equipment, or 36 miles of cable.

Detail of Carriages and Stores.	a. Pontoon troop.	b. Field Equipment Troop.		c. Telegraph troop.	
		Number.			
		Each of 4 com- panies.	Field park.		Total of companies and field park.
Wagons { forge - - -	1	—	—	—	2
general service - - -	5	6	6	30	4
office† - - -	1	—	3	3	4
pontoon - - -	24*	—	—	—	2
wire - - -	—	—	—	—	12
Harness , double sets, wheel -	62	14	19	75	45
officers' - - sets	4	5	1	21	5
Saddlery { N.C. officers' „	16	4	5	21	38
pack „	—	4	—	16	2
Tools , artificers', see p. 188.					

Materials for artificers, sufficient for 12 months; for veterinary purposes, sufficient for 6 months. Farriers provide their own.

Stable necessaries, a fixed supply for each horse.

* 4 of these carry trestles.

† One of these in each troop is fitted up as a photograph wagon, and one as a printing wagon.

III. ARMY SERVICE CORPS.

Field
Service.DETAIL of a Service Company of Transport, and of the Depôt
Company Establishment.

CARRIAGES.

						Service.	Depôt.
Carts, spring	-	-	-	-	-	—	—
Wagons	ambulance	-	-	-	-	1	—
	forge	-	-	-	-	2	—
	general service	-	-	-	-	15	10
Total						18	10

PACK EQUIPMENT.

Saddles, pack, complete	-	-	-	-	-	3	3
Cacolets, pairs	-	-	-	-	-	2	2
Litters, pairs	-	-	-	-	-	1	1

N.B.—The War Establishment of wagons for the Army Service Corps includes the stores for encampment detailed in paragraph 125.

IV. CAVALRY.

CARTS, HARNESS, AND SPARE ARTICLES.

Carts, spring	-	-	-	-	1 per squadron.
Harness, double sets,* wheel	-	-	-	-	1 per squadron.
<i>Spare Articles.</i>					
Bands, back and belly	-	-	-	-	1 per regiment.
Bits, portmouth, with bridle head, curb chain, and hook.	-	-	-	-	1 per regiment.
Whips, drivers'	-	-	-	-	1 per regiment.

* Less bits, bridoon with reins, collars, headstall, stirrup irons and leathers, and numnahs, all which articles are to be obtained when required from the general regimental supply.

Lists of Equipment.

V. ARMS AND ACCOUTREMENTS.

1. Lists of Equipment.
2. Lists of Materials for Repairing Arms.
3. Lists of Materials for Repairing Accoutrements.

Supplied in accordance with paragraph 132.

HOUSEHOLD CAVALRY, CAVALRY OF THE LINE, AND CAVALRY DEPÔTS, ARMY SERVICE CORPS, TRANSPORT COMPANIES, AND STATION STAFF.

Articles.	Household Cavalry.			Dragoon Guards, Dragoons, Hussars, and Lancers.				Dragon Guards, Dragoons, and Hussars, Sergeants and rank and file, Band excepted.	Lancers, Sergeants, and rank and file, Band excepted.	Army Service Corps, Transport Companies.	Remarks.
	Staff Corporals, Troop Corporals-major, and Trumpeters.	Corporals and Artificers, rank and file, except Band.	Band.	Regimental Sergeant-major.	Trumpet-major, Troop Sergeant-majors, and Trumpeters.	Other Staff Sergeants, and Band.	Farriers.				
Arms.	Carbines, complete with cleaning rods, covers for backsights, foresight protectors, and snap caps.	—	1	—	—	—	—	1	—	—	
	lances, complete with flags and slings.	—	—	—	—	—	—	—	1	—	
	pistols, complete with cleaning rods and muzzle stoppers.	1	—	—	1	—	—	—	1	—	
	swords and scabbards.	—	—	—	1	1	1	1	1	1	
	wrenches, nipple	—	—	—	—	—	—	—	—	—	6 per troop, and 3 spare nipples per nipple wrench.
Accoutrements.	axes, felling, with caps and slings.	—	1*	—	—	—	1	—	—	—	
	bags, squad, <i>see</i> p. 143.	—	—	—	—	—	—	—	—	—	
	belt { pouch	—	—	—	1	1	—	1	1	—	
	waist	—	—	—	1	1	1	1	1	1	
	bottles, water, with straps.	1	1	1	1	1	1	1	1	1	
	cuirasses	1	1	—	—	—	—	—	—	—	
	handcuffs, <i>see</i> p. 143.	—	—	—	—	—	—	—	—	—	
	haversacks	1	1	1	1	1	1	1	1	1	
	knots, sword	—	—	—	1	1	1	1	1	1	
	pickers, hoof	—	—	—	1	1	1	1	1	1	
	pouches { ammunition.	—	—	—	1	1	—	1	1	—	
cap	—	—	—	1	—	—	—	1	—	1, all ranks, Hussars only.	
sabretaches	—	—	—	—	—	—	—	—	—		

* Farriers only.

ARMS AND ACCOUTREMENTS.

V.

GENTLEMEN CADETS, ROYAL MILITARY ACADEMY; WARDERS,
MILITARY PRISONS; AND ARMY HOSPITAL CORPS.Lists of
Equip-
ment.

Articles.	Gentlemen Cadets, R.M.A.			Military Prisons.		Army Hospital Corps.			Remarks.
	Staff Serjeants.	Cadet under Officers and Senior Class.	Gentlemen Cadets.	Chief Warders.	Warders.	Staff Serjeants.	Serjeants and Rank and File.	Buglers.	
Arms { carbines, complete, with sword bayonets, scab- bards, cleaning rods, and snap caps.	-	-	1	-	-	-	-	-	Wrenches, nipple, with cramp, for Snider arms as required for cadets.
swords and scabbards	1	1	-	1	-	1	1	1	
belts { pouch	1	-	-	-	-	-	-	-	}
	1	1	1	1	1	1	1	1	
bottles, wood, with strap.	-	-	-	-	-	1	1	1	
braces	-	-	-	-	-	1	1	1	
frogs	-	-	1	-	-	-	1	1	
Accoutre- ments } haversacks	-	-	-	-	-	1	1	1	
knots, sword	1	1	-	1	-	1	-	-	
pouches, 20 rounds	1	-	1	-	1	-	-	-	
shields, valise, with letters.	-	-	-	-	-	1	1	1	
slings, carbine	-	-	1	-	-	-	-	-	
straps, pairs { great coat	-	-	-	-	-	1	1	1	}
	-	-	-	-	-	1	1	1	
	-	-	-	-	-	1	1	1	
valises	-	-	-	-	-	1	1	1	

V.

ARMS AND ACCOUTREMENTS.

Lists of Equipment.

ROYAL ARTILLERY, ROYAL ENGINEERS, ROYAL MALTA FENCIBLE ARTILLERY, SCHOOL OF GUNNERY, AND GUN LASCARS.

Articles.	Royal Horse and Field Brigades, Riding Establishment, also Royal Engineer Train. Men with dismounted Kits excepted.		Garrison and Coast Brigades, Royal Malta Fencibles, Gun Lascars, and Royal Engineers (N.C.O. and Men of the R.E. Train with mounted Kits excepted).				School of Gunnery, Staff Sergeants excepted, and Gunnery Field Brigade with dismounted Kits.	Remarks.	
	Master Gunnery and Staff Sergeants, including School of Gunnery, Royal Artillery and Engineer Staff Clerks, and Military Foremen of Works.*	Sergeants, Battery Staff Sergeants, and Company Sergeant-Majors, R.E.	Trumpeters, or Buglers.	Rank and file and Artificers, also men, Royal Engineer Train with dismounted Kits.	School of Gunnery, Staff Sergeants excepted, and Gunnery Field Brigade with dismounted Kits.	School of Gunnery, Staff Sergeants excepted, and Gunnery Field Brigade with dismounted Kits.			
Arms. {	carbines, complete with sword bayonets, snap caps, and cleaning rods.	—	—	1†	—	1†	—	12 per battery R.H.A. and Field Artillery; those for R.H.A. without bayonets.	
	rifles, complete, with cleaning rods, jags, sight protectors, snap caps, and sword bayonets, with scabbards.	—	—	1†	—	1†	—		
	implements, action†-swords with scabbards.	1	1	—	—	—	—	Drivers of R.H.A. and Field Batteries have no swords.	
	sword bayonets with scabbards.	—	—	—	1	—	1		
	wrenches, nipple, with cramps.	—	—	—	—	—	—	6 per battery, R.H.A. and Field Artillery, 1 per serjeant, and 1 per corporal of Garrison, and Coast Brigades, Gun Lascars, and Malta Fencibles, for each serjeant, corporal, and 2nd corporal dismounted of Royal Engineer Train. Serjeants and battery staff serjeants, R.A., do not carry ammunition bags.	
Accoutrements. {	bags, ammunition	—	—	1†	—	1	—		
	belts, leather {	waist, with pouch -	§1	1	—	1	—	—	
			plates or snake hooks.	—	—	1	1	1	1
	bottles, water, with straps.	1	1	1	1	1	1		
	braces, leather	—	—	1	1	1	1		
	frogs, leather	—	—	1†	1	1	1		
	handcuffs, see p. 143.	—	—	—	—	—	—		
	haversacks	1	1	1	1	1	1		
	knots, swords	1	1	—	—	—	—	Not required for R.A. drivers.	
	pickers, hoof	1	—	—	—	—	—	12 per battery for R.H.A. & Field Arty.	
	pouches, leather	—	1	1†	—	1	—		
	shields, valise, with letters.	—	—	1	1	1	1		
	slings, carbine	—	—	1†	—	1	—	12 per battery Field Artillery.	
straps, (great coat)	—	—	1	1	1	1			
prs. (mess tin)	—	—	1	1	1	1			
valises (supporting)	—	—	1	1	1	1			

* The only non-commissioned officers of the Garrison and Coast Brigades of the Royal Artillery who are entitled to receive staff serjeants' appointments, are the serjeant major, quartermaster serjeant, trumpet major, assistant gunnery instructor, orderly room clerk, paymaster serjeant, armourer serjeant, and serjeant cook. Staff serjeants of artillery are equipped as such according to the brigades to which they belong. The second assistant gunnery instructor is not so entitled. Gun lascars have M.L. carbines, and both Royal Malta Fencibles and Gun Lascars have knapsack, not valise, equipment.

† Royal Engineers have rifles.
 ‡ One per company of Engineers only.
 § Drivers of field brigades, R.A., have waist-belts and plates.
 || Not for gunners of Field Brigades, with dismounted kits.

ARMS AND ACCOUTREMENTS.

V.

REGIMENTS OF FOOT GUARDS AND INFANTRY, INCLUDING WEST INDIA REGIMENTS, BRIGADE DEPOTS, ARMY SERVICE CORPS, SUPPLY AND STORE COMPANIES, STAFF CLERKS, AND SCHOOL OF MUSKETRY.

Lists of Equipment.

Articles.	Staff Serjeants, including Garrison Staff, School of Musketry, Invalid Depot, Recruiting Staff, and Staff Clerks.	Serjeants, except Army Service Corps, School of Musketry, and Staff.	Band, Buglers, Drummers, except Highlanders, and Army Service Corps, also for Pioneers.	Pipers, Band and Drummers, Highland Regiments, and Pipers, Scots Fusilier Guards.	Rank and File, except Band, Pioneers, Army Service Corps, and School of Musketry.	Serjeants, and Rank and File.	Buglers.	School of Musketry, except Staff Serjeants.	Remarks.
carbines complete, with sword bayonets, scabbards, cleaning rods and snap caps.	-	-	-	-	-	1	-	-	
rifles, complete with cleaning rods, jags, sight protectors, and snap caps.	-	-	-	-	1†	-	-	1	In Regiments of Infantry it may be assumed that the following have Staff Serjeants appointments—Serjeant - major; Quarter-master Serjeant; Band master; Drum or Bugle-major; Paymaster Serjeant; Armourer Serjeant; Orderly room clerk; Serjeant Cook; Serjeant Instructor of Musketry; Band Serjeant; Master Tailor and Canteen Serjeant. The following carry special swords: Pioneers:—One Serjeant and 10 men. The following have swords or dirks:—Band - - 21 Drummers or Buglers - 16—37
bayonets, sword, with scabbards.	-	-	-	-	-	-	1	-	
dirks and scabbards -	-	-	-	1	-	-	-	-	
swords or claymores with scabbards.	1	-	1	-	-	-	-	-	
implements action* -	-	-	-	-	-	-	-	-	
bags { ammunition -	-	1	-	-	1	-	-	1	
belts, waist, with union lockets, plates, or snake hooks. §	1	1	1	1	1	1	1	1	
bottles { wood, with straps.	1	1	1	1	1	1	1	1	
zinc, for oil	-	1	-	-	1	-	-	-	
braces - - -	1	1	1	1	1	1	1	1	
carriages, leather, side drum. †	-	-	-	-	-	-	-	-	
frogs - - -	-	1	1	-	1	1	1	1	
handcuffs, see p. 143.	-	-	-	-	-	-	-	-	
haversacks - -	1	1	1	1	1	1	1	1	
knots, sword	|| 1	-	-	-	-	-	-	-	
loops, dirk - -	-	-	-	1	-	-	-	-	

* 1 per company.

† 1 per side drum.

‡ Rank and file in rifle regiments have sword bayonets, artificers in all regiments to be fully armed, pioneers to have saw back sword, but no rifles.

§ Union lockets not for rifle regiments, staff serjeants of the Army Service Corps, nor serjeants and rank and file of the School of Musketry. Plates, square, German silver, for pipe major and pipers of Highland regiments. Waist belts for boys are not allowed.

|| Not supplied to staff serjeants of Highland regiments.

See Remarks, cont.

V. ARMS AND ACCOUTREMENTS.

Lists of Equipment.

REGIMENTS OF FOOT GUARDS AND INFANTRY—cont^d.

Articles	REGIMENTS OF FOOT GUARDS AND INFANTRY—cont ^d .								Remarks.		
	Staff Serjeants, including Garrison Staff, School of Musketry, Invalid Depot, Recruiting Staff, and Staff Clerks.	Serjeants, except Army Service Corps, School of Musketry, and Staff.	Band, Buglers, Drummers, except Highlanders and Army Service Corps, also for Pioneers.	Pipers, Band and Drummers, Highland Regiments, and Pipers, Scots Fusilier Guards.	Rank and File, except Band, Pioneers, Army Service Corps, and School of Musketry.	Serjeants, and Rank and File.	Army Service Corps; Supply and Store.	Buglers.		School of Musketry, except Staff Serjeants.	
Accoutrements.	pouches, 20 rounds	-	1	-	-	2	1	-	2	Should there be no Canteen Serjeant there will be an additional rifle with ordinary bayonet. The numbers of Serjeants appointments will never vary, they will always be 32 or 40. Pioneer serjeants wear Serjeants' waistbelts.	
	shields, valise, with numerals or letters.	1	1	1	1	1	1	1	1		
	slings, carbine or rifle	-	1	-	-	1	1	-	1		
	straps, prs.	great coat.	1	1	1	1	1	1	1		1
		mess tin	1	1	1	1	1	1	1		1
		supporting.	1	1	1	1	1	1	1		1
	valises	-	1	1	1	1	1	1	1		

NOTE.—Nipple wrenches with cramps are supplied to the Army Service Corps in the proportion of one to each serjeant, corporal, and second corporal. They are not supplied for Martini Henry arms. The serjeants appointments of the band serjeant and master tailor will be appropriated to the lance serjeants doing their duty.

PROPORTIONS OF SPARE PARTS OF ARMS ALLOWED.

Articles.	Infantry Regiments and Brigade Depôts.	Regiments of Dragoons and Hussars.	Regiments of Lancers.	Remarks.
Rifles, B.L., parts of	bayonets { common	3	—	—
	and scabbards { sword	1*	—	—
	caps, snap	6	—	—
	jags	6	—	—
	protectors, foresight	10	—	—
	rods, cleaning	6	—	—
Carbines, B.L., parts of, rods, cleaning	—	2 per cent.	—	—
Lances, flags for	—	—	8	—
Pistols, parts of	nipples	—	24	144
	rods, cleaning	—	—	8

* Four spare for Rifle Regiments.

ARMS AND ACCOUTREMENTS.

V.

PROPORTIONS OF SPARE PARTS OF ACCOUTREMENTS ALLOWED.

Articles.	Infantry Regiments and Brigade Depôts.	Dragoon Regiments.	Hussar Regiments.	Lancer Regiments.	Batteries of Artillery.		Royal Engineers.		Army Service Corps Companies.		Remarks.
					Horse and Field.	Garrison.	Troops.	Companies.	Transport.	Supply.	
Belts, leather, rank and file	-	18	18	-	-	-	-	-	-	-	
{ Cavalry	-	-	-	18	-	-	-	-	-	-	
{ Lancers	-	8	-	8	-	-	-	-	-	-	
{ Cavalry	3	-	-	-	-	-	-	-	-	-	
{ Infantry	-	-	8	-	-	-	-	-	-	-	
{ Hussars	-	-	-	-	-	-	-	-	-	-	
Billets, leather, buff, with buckles, rank and file	-	32	32	32	-	-	-	-	-	-	
{ sabretache	-	-	-	-	-	-	-	-	-	-	
{ waistbelt	3	-	-	-	-	-	-	-	-	-	
Frogs, leather, rank and file	-	-	-	-	-	-	-	-	-	-	
Haversacks	4	16	16	16	-	-	-	-	-	-	
Knots, leather, sword, buff, rank and file	-	8	8	8	-	-	-	-	-	-	
Pouches, leather, ammunition, 20 rounds	4	-	-	-	-	-	-	-	-	-	
Stings, leather, rifle	3	-	-	-	-	-	-	-	-	-	

Lists of Equipment.

V.

ARMS AND ACCOUTREMENTS.

Repair of Arms.

2. Lists of Materials for repairing Arms.

Supplied in accordance with paragraph 323.

Tables I., II., III., and IV., following, contain complete lists of the various parts of rifles, carbines, pistols, swords, and lances, supplied at the public expense to Commanding Officers for Armourer Serjeants for the repair of arms. The parts of interchangeable arms are issued as a rule in the finished state.

Table I. shows the proportions in which the principal component parts are allowed if required, for every 1,000 stand of Martini Henry arms and under. Table II. shows the proportions for Snider B.L. arms, and where these quantities are for 1, 3, or 5 articles, the numbers to be allowed to regiments and corps of 500 men or under will be respectively 1, 2, or 3, as the case may be; in other cases where the quantities are even, one half will be supplied. Parts to which no fixed proportions are assigned will be supplied only as required on special requisitions.

TABLE I.—MARTINI HENRY RIFLES.

Description of Article.		Proportion for				
		500 Arms and under.	501 Arms up to 1,000.			
ARMS.						
Interchangeable, parts of	Furniture.	Bayonets. { common parts of { sword, parts of {	rings, locking† - - -	1*	2*	
			screws, locking ring - - -	1*	2*	
			scabbards, leather, parts of {	lockets -	1*	2*
				tips -	1*	2*
			common to all sword bayonets {	grips, leather, pairs -	2*	4*†
				rivets, grip, wire, iron, for, W.G. 9 (2 lbs. make 100) - ozs.	2*	4*†
	Furniture.	bands, parts of { lower and middle, screws for - upper { nuts, screw - screws - swivels - plates, butt, parts of, screws, large -	screws, springs -	3*	6*†	
			lower and middle, screws for -	5*	10*	
			nuts, screw -	5*	10*	
			screws -	5*	10*	
			swivels -	3*	6*	
			plates, butt, parts of, screws, large -	2*	4*	

* Same as Snider.

† As the sword and common bayonets are mixed interchangeable and non-interchangeable, the locking rings will have to be fitted in many cases.

‡ These proportions are for rifle regiments only.

ARMS AND ACCOUTREMENTS.

V.

MARTINI HENRY RIFLES—cont^d.

Repair of Arms.

Description of Article.		Proportion for			
		500 Arms and under.	501 Arms up to 1,000.		
Interchangeable, parts of	actions, parts of	breech - - - - -	1	2	
		lever catch - - - - -	1	2	
		blocks { pins {	axis - - - - -	2	4
			lever catch - - - - -	3	6
			springs, lever catch - - - - -	3	6
		bodies - - - - -	1	2	
		extractors - - - - -	3	6	
		indicators - - - - -	3	6	
		levers - - - - -	2	4	
		nuts, stop - - - - -	2	4	
		pins, extractor - - - - -	2	4	
		screws, keep {	indicator - - - - -	5	10
			stop nut - - - - -	5	10
			springs, main - - - - -	15	30
		strikers - - - - -	15	30	
	tumblers - - - - -	10	20		
	tumblers, parts of {	rests - - - - -	3	6	
		screws, rest - - - - -	2	4	
	barrels, parts of {	pins, stud - - - - -	2	4	
		stops, stud - - - - -	3	6	
		studs - - - - -	1	2	
	bayonets, converted {	common, with locking rings - - - - -	2	4	
		sword, rifle, short - - - - -	2	4*	
	caps, snap, parts of {	pellets - - - - -	10	20	
		screws - - - - -	5	10	
		springs - - - - -	3	6	
	furniture {	bands {	without screws, lower - - - - -	1	2
			without swivels, upper - - - - -	1	2
			parts of, pins {	lower - - - - -	2	4
		upper - - - - -		2	4
		caps, nose - - - - -	1	2	
		" " screws for - - - - -	2	4	
		guards, trigger - - - - -	1	2	
		" " parts of {	swivels - - - - -	3†	6†
		" " screws for - - - - -	5†	10†	
		swivels, butt - - - - -	3†	6†	
	triggers {	iron - - - - -	2	4	
		screws for {	trigger - - - - -	3	6
			spring, trigger - - - - -	3	6
	springs for - - - - -	5	10		
	rods, cleaning, parts of {	holders - - - - -	1	2	
		screws, {	long - - - - -	1	2
			holder { short - - - - -	1	2
	sights, back, elevating, parts of {	leaves, assembled, with caps and slides - - - - -	2	4	
		pins, axis - - - - -	3	6	

* These proportions are for Rifle Regiments only. For other Regiments, one sword-bayonet and one scabbard are allowed as spare ; and the other articles are only issued when actually required.

(a) Non-interchangeable bolts and springs will be issued for all sword bayonets, and will require to be fitted.

† Same as plates, trigger guard, rifle, { swivels
B.L., Snider, pattern '53, parts of { " screws for.

‡ For Rifle Regiments only.

V. ARMS AND ACCOUTREMENTS.

MARTINI HENRY RIFLES—cont^d.

Repair of Arms.

Description of Article.	Proportion for	
	500 Arms and under.	501 Arms up to 1,000.
Interchangeable, parts of { sights, back, elevating, parts of { screws { cap - - - - - 5 short or bed - - - - - 3 spring - - - - - 3 slides - - - - - 2 spring- - - - - 2 sights, fore or barleycorn - - - - - 2 stocks { butts { long - - - - - 1 short - - - - - 1 fore ends - - - - - 2 parts of { bolts - - - - - 1 washers, bolt - - - - - 3 Non-interchangeable, parts of { bayonets, bolts - - - - - 2* sword, springs, bolt - - - - - 2 parts of } parts of }	5	10
	3	6
	3	6
	2	4
	2	4
	2	4
	1	2
	1	2
	2	4
	1	2
3	6	
2*	4†	
2	4†	

TABLE II.—INTERCHANGEABLE B.L. RIFLES AND CARBINES.

Parts of Artillery and Cavalry Carbines, patt. '61; and long, patt. '53, and short, patt. '60, Enfield Rifles, Breech-loading Snider, converted.	Numbers allowed per 1,000 arms.	Remarks.
Actions { parts of { common to patterns II.** and III. { covers { external - - - - - 2 spring { internal - - - - - 2 nipples - - - - - 4 pins, breech-block - - - - - 2 pistons - - - - - 20 screws, pin, breech-block - - - - - 10 springs { pin, breech-block - - - - - 10 piston - - - - - 10 special to { pattern II.** { pins, locking - - - - - 2 screws, pin, locking - - - - - 2 springs, pin, locking - - - - - 2 pattern III. { bolts, breech-block - - - - - 1 pins, thumb-piece, roller, axis. - - - - - 1 rollers, thumb-piece - - - - - 1 screws, breech-block, thumb-piece. - - - - - 10 springs, breech-block, bolt - - - - - 1 thumb-pieces - - - - - 1 Barrels, parts of, screws, tang - - - - - 4 Bayonets, parts of { rings, locking - - - - - 2 screws, ring, locking - - - - - 2	2	or all arms. } For long rifles.
	2	
	4	
	2	
	20	
	10	
	10	
	10	
	2	
	2	
	2	
	1	
	1	
	1	
	10	
1		
1		
4		
2		
2		

* Same as Snider.

† These proportions are for Rifle Regiments only. For other Regiments, one sword-bayonet and one scabbard are allowed as spare; and the other articles are only issued when actually required.

(a) Non-inter. bolts and springs will be issued for all sword-bayonets, and will require to be fitted.

ARMS AND ACCOUTREMENTS.

V.

INTERCHANGEABLE B.L. RIFLES AND CARBINES—cont^d.

Repair of Arms.

Parts of Artillery and Cavalry Carbines, patt. '61 ; and long, patt. '53, and short, patt. '60, Enfield Rifles, Breech-loading Snider, converted.		Numbers al- lowed per 1,000 arms.	Remarks.			
Bayonets, sword, parts of	bolts - - -	2	} For artillery carbines and short rifles.			
	screws, spring	2				
springs, bolt, milled and drilled.	2					
Caps, snap, parts of, leathers, B.L.	- - -	1 per arm.	All B.L. arms.			
Covers, leather, back sight cavalry carbine	- - -	- - -	- - -			
Furniture	bands, parts of	screws	lower - - -	2	For all arms.	
			middle - - -	2	For long rifles.	
		upper	long rifles	3	}	
			short rifles, and artillery carbine.	3		
	swivels	- - -	2	Except for cavalry carbine.		
	plates	butt, brass, with trap	parts of	complete, carbine, cavalry -	5	} For cavalry carbines.
				pins, trap, axis	10	
				screws, trap, spring	10	
				springs, trap	10	
		traps	20			
trigger guard, parts of	eyelets - - -	8	} For arms not fitted with guard swivels.			
swivels, rifle, long -	16					
swivels, swivel -	20	For long rifles.				
swivels, butt, carbine, artillery, and short rifle	- - -	4				
carbines, artillery, and cavalry, and long rifle.	- - -	2	II.** or III.			
Locks, parts of	hammers	rifle, short - - -	2	} For all arms.		
		screws, tumbler - - -	12			
	sears	carbines, artillery, and cavalry, and long rifle.	3			
		rifle, short - - -	3			
	springs	main	carbines, artillery, and cavalry, and long rifle.		12	
			rifle, short - - -		12	
		sear	carbines, artillery, cavalry, and long rifle.		8	
			rifle, short - - -		8	
	swivels, tumbler - - -	- - -	2		} For all arms.	
	tumblers	carbines, artillery, and cavalry, and long rifle.	4			
	rifle, short - - -	4				
Sights, back, elevating, parts of	leaves, assembled, with caps and slides	car- bines	artillery - - -	2	} For artillery and cavalry carbines.	
			cavalry - - -	2		
			long - - -	2		
			short - - -	2		
	screws, spring	carbines	4	} For artillery and cavalry carbines.		
		rifles, long and short -	4			
	slides*	carbines - - -	8	} For artillery and cavalry carbines.		
		rifles - - -	8			
	springs†	carbines - - -	2	} For artillery and cavalry carbines.		
		rifles, long and short -	2			
Stocks, parts of, splices, long	- - -	4	Except for cavalry carbines.			

* Issued filed and finished.

† Issued milled and drilled.

V.

ARMS AND ACCOUTREMENTS.

Repair of Arms.

TABLE III.—NON-INTERCHANGEABLE M.L. PISTOLS.

Articles for Repair of 10 and 8 inch Rifled Cavalry Pistols, Non-interchangeable.	
Barrels	{ filed, percussioned, and jogged, not browned, left full to size, swivel lump filed and drilled, bolt hole cut. parts of { loops, forged. { nipples, finished. { screws, breech-tang.
Caps	{ butt, { brass, cast. { parts of { nuts. { rings. { screws, set of 2. nose, brass, { with pipes. cast. { parts of, screws, wood, set of 2.
Cups,	brass, stamped, complete.
side,	parts of, screws, forged, set of 2.
Locks	{ assembled, complete. parts of { screws, forged, set of 2. { bridles, forged. { hammers, forged. { finished, lock end. { forged { bridle. { sear. { sear-spring tumbler. sears, filed, left soft. springs, filed, tempered, } main sear. stud left large - swivels, filed, left soft. tumblers, filed, swivelled, bents not cut.
Plates	{ trigger guard { cast. trigger, cast. { screws for.
Rammers,	{ parts of { finished { heads. { forged { screws. { arms. { eyes.
Stocks	{ in the rough. parts of, bolts for, forged, set of 2.
Triggers,	filed, left soft.

TABLE IV.—CAVALRY SWORDS, SWORD SCABBARDS, AND LANCES.

Part of Cavalry Swords and Scabbards.	Parts of Cavalry Lances.
Scabbards. { linings, wood. sword, caval- { mouth pieces, with ry, parts of { sputcheons.* { rings, filed. { tips, steel.†	Lances, { flags, with elastic band. service { rivets, wire for. { screws { iron, set of 3. { wood (8), with { for 3 copper tacks. { slings. { thongs, 2, for lacing.
Swords, { iron hilt. { cavalry { grips, leather, pairs. parts of, { rivets, wire for.	{ pattern, 1868, pattern, 1860, parts of, parts of, { flags. { laces for flag. { slings. { thongs.

* In making requisition for mouth-pieces with sputcheons, it will be necessary to state whether they are required for small or large sized scabbards.
 † Shoes, scabbard, will no longer be supplied.

ARMS AND ACCOUTREMENTS.

V.

REGIMENT OF CAVALRY.

Accoutrements for which Spare parts are required.	Spare Parts and Materials.		Dragoons.		Hussars.		Lancers.	
	606 Men.	506 Men.	606 Men.	506 Men.	606 Men.	506 Men.	606 Men.	506 Men.
pouch	buckles { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	6	6	5	5	6	5
	slides { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	-	-	-	-	6	5
	studs { gilt, staff serjeants' -	-	2	2	2	2	2	2
	{ brass, other ranks -	-	29	24	29	24	-	-
	tips { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	6	6	5	5	6	5
	billets, buff without buckles { staff serjeants' -	-	3	3	3	3	3	3
	{ other ranks -	-	88	73	88	73	88	73
Belts, leather, buff.	buckles { 1 1/2 inch { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	6	6	5	5	6	5
	{ gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	12	10	12	10	12	10
	carriages, buff { long { staff serjeants' -	-	2	2	2	2	2	2
	{ other ranks -	-	29	24	29	24	29	24
	{ short { staff serjeants' -	-	2	2	2	2	2	2
	{ other ranks -	-	29	24	29	24	29	24
	catches for snake hooks { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	6	5	6	5	6	5
Maversacks, canvas, with buttons and slides	hooks, snake, without catches { gilt, staff serjeants' -	-	1	1	1	1	1	1
	{ brass, other ranks -	-	6	6	5	5	6	5
	loops for slings, sabretache { gilt, staff serjeants' -	-	6	6	5	5	6	5
	{ brass, other ranks -	-	-	-	-	-	-	-
	runners, buff, all ranks -	-	23	19	23	19	23	19
	tabs, buff for loops, all ranks -	-	-	-	12	10	-	-
	with buttons and slides { buttons, white metal, 4-hole, all ranks -	-	88	73	88	73	88	73
	{ slides, brass, all ranks -	-	23	19	23	19	23	19
	{ sets -	-	23	19	23	19	23	19
	{ knots, sword, buff, buttons, brass, serjeants and rank and file -	-	-	-	-	-	-	-

Repair of Accoutrements.

V.

ARMS AND ACCOUTREMENTS.

Repair of Accoutrements.

Regiment of Cavalry—continued.

Accountments for which Spare parts are required.	Spare Parts and Materials.	Dragoons.		Hussars.		Lancers.	
		606 Men.	506 Men.	606 Men.	506 Men.	606 Men.	506 Men.
Knots, sword, buff	{ runners, buff { staff sergeants' other ranks	1	1	1	1	1	1
		23	19	23	19	23	19
		1	1	1	1	1	1
		23	19	23	19	23	19
		2	2	2	2	2	2
		29	24	29	24	29	24
		6	5	6	5	6	5
		23	19	23	19	23	19
		2	2	2	2	2	2
		23	19	23	19	23	19
Pouches, leather, ammunition, black japanned.	{ flaps, black japanned, sergeants and rank and file hinges, leather for flaps, black japanned, sergeants and rank and file rings { gilt, staff sergeants' brass, other ranks studs { gilt, staff sergeants' brass, other ranks	1	1	1	1	1	1
		23	19	23	19	23	19
		2	2	2	2	2	2
		29	24	29	24	29	24
		6	5	6	5	6	5
		23	19	23	19	23	19
		2	2	2	2	2	2
		23	19	23	19	23	19
		1	1	1	1	1	1
		10	9	10	9	10	9
Sabretaches, leather, black.	{ billets, buff for flaps, black, all ranks buckles for billets { gilt, staff sergeants brass, other ranks buttons, brass for pockets, sergeants and rank and file D.'s { gilt, staff sergeants' brass, other ranks flaps, leather, { staff sergeants', japanned black. { other ranks loops, buff (fixed) for slings { staff sergeants' other ranks slings, buff, without billets { staff sergeants' other ranks studs for billets, all ranks straps, leather back for sword rests, black { staff sergeants' other ranks	1	1	1	1	1	1
		23	19	23	19	23	19
		2	2	2	2	2	2
		29	24	29	24	29	24
		6	5	6	5	6	5
		23	19	23	19	23	19
		2	2	2	2	2	2
		23	19	23	19	23	19
		1	1	1	1	1	1
		10	9	10	9	10	9

N.B.—The troop sergeant majors are included in "staff sergeants." * Triennially, if required.

ARMS AND ACCOUTREMENTS.

V.

INFANTRY. ANNUAL SUPPLY.

Repair of
Accoutre-
ments.

Articles.	For a Highland Regiment of		For a Line Regiment of		For a Rifle Regiment of			
	820 rank and file.	600 or 620 rank and file.	820 rank and file.	600 or 620 rank and file.	820 rank and file.	600 or 620 rank and file.		
Billets, leather, black or buff	ammunition bag - -	18	12	18	12	18	12	
	infantry pouch, valise equip- ment.	18	12	18	12	18	12	
	rifle regiments, belts, waist, staff serjeants, without buckles.	—	—	—	—	2	2	
Buckles,	black japan, $\frac{3}{4}$ -inch for valise -	36	24	36	24	36	24	
	braces	$\frac{3}{4}$ -inch front strap all ranks	18	12	18	12	18	12
		1-inch side strap - -	18	12	18	12	18	12
		$\frac{3}{4}$ -inch supporting strap -	18	12	18	12	18	12
	brass	infantry, belts, waist rank and file.	17	11	18	12	—	—
		frogs, serjeants, &c.	1	1	2	2	—	—
		rifle regiments, belts, waist serjeants, and frogs, all rank and file. ranks.	—	—	—	—	17	12
	german silver plated, staff serjeants - gilding metal.	gilt, staff serjeants waist belts serjeants, belts, waist	1	1	1	1	1	1
		serjeants, belts, waist	1	1	1	1	—	—
		mess tin and great-coat straps	32	24	32	24	32	24
leather, black slings, rifle regi- ments.		—	—	—	—	34	24	
Buttons,	white metal haversack, 4 hole	140	100	140	100	—	—	
Car- riages, leather waistbelt	black, without billets, long staff serjeants, rifle regiments.	—	—	—	—	1	1	
	buff, with attached bil- lets, staff serjeants, in- fantry.	—	—	—	—	1	1	
	long	1	1	1	1	—	—	
	short	1	1	1	1	—	—	
Catches, waist belt, brass, for snake hooks, rifle regiments.	—	—	—	—	18	18		
Frogs, leather, buff, infantry, front parts of	brass, valise equipment, connect- ing braces to waist belts, all ranks, infantry and rifles.*	16	11	16	11	—	—	
	brass, valise equipment, connect- ing braces to waist belts, all ranks, infantry and rifles.*	28	20	28	20	28	20	
Hooks	waist belt, brass, rifle regiments, snake, without catch, serjeants and rank and file.	—	—	—	—	18	18	
	brass, triangular, for waist-belts, V.E. rank and file.	36	24	36	24	36	24	
Loops	gilding metal, triangular, for waist- belts, V.E. serjeants.	1	1	1	1	1	1	
	leather, black -	shifting, for frogs, pioneers, rifle regiments.	—	—	—	—	1	1
		slings, rifle regiments	—	—	—	—	25	18
	leather, buff	shifting for frogs, pioneers, infantry.	1	1	1	1	—	—
	slings, infantry -	25	18	25	18	—	—	

* Only for such regiments as had the first pattern of waist belts.

V. ARMS AND ACCOUTREMENTS.

Repair of Accoutrements.

INFANTRY. ANNUAL SUPPLY—cont^d.

Articles.	For a Highland Regiment of		For a Line Regiment of		For a Rifle Regiment of					
	820 rank and file.	600 or 520 rank and file.	820 rank and file.	600 or 520 rank and file.	820 rank and file.	600 or 520 rank and file.				
Loops { valise equipment waist belts, infantry	brass, rank and file, also serjeants and rank and file rifles. { long	17	12	18	13	18	13			
		gilding metal. { serjeants { short	17	12	18	13	18	13		
			gilt, staff serjeants { short	1	1	1	1	—	—	
				long	1	1	1	1	—	—
					short	1	1	1	1	—
Rings, brass, valise equipment, all ranks -	2	2	2	2	2	2				
Runners, leather. { black, rifle regiments, rifle slings.	—	—	—	—	17	12				
	buff, infantry, rifle slings -	17	12	17	12	—	—			
Safes, waist belt { black, rifle regiments -	—	—	—	—	18	13				
	buff, infantry -	17	12	18	13	—	—			
Slides, brass, for haversacks -	37	26	37	26	—	—				
Straps, leather. { black { frog, rifle regiments, all ranks - valise equipment pouch, rifle regiments.	—	—	—	—	18	13				
	buff { pouch, valise equipment -	33	23	33	23	—	—			
Studs, brass, pouch, valise equipment, infantry and rifle regiments.	1	1	2	2	—	—				
	frog, serjeants, band, drummers, and hospital orderlies.	33	23	33	23	33	23			
Thongs, leather. { black, for slings, rifle regiments	—	—	—	—	50	38				
	white, horse hide, infantry slings	43	30	43	30	—	—			
Tips, brass, for belts, pioneers? -	—	—	—	—	—	—				

Only issued when actually required.

ARMY SERVICE CORPS.

Articles.	Transport Company.	Supply Company.*	
Billets { pouch, valise equipment, serjeants and rank and file -	—	2	
	waist belt, without buckles, all ranks -	16	—
Buckles { brass { billet -	3	—	
	frog -	—	2
	waist belt -	2	2
	braces { 1 1/4-in. roller -	—	2
		3/4-in. -	—	2
	great coat strap, 3/4-in. roller -	—	2
	mess tin strap, 3/4-in roller -	—	2
	supporting strap, 3/4-in. -	—	2
	bridge bar -	—	2
	iron, japanned, 3/4-in. for valise	—	10
gilding metal gilt, staff serjeants, waist belts -	—	1	
Buttons { brass, sword knot -	6	—	
	sling, carbine -	—	3
white metal, 4 holes -	16	16	

* Or per 100 sets of accoutrements.

ARMS AND ACCOUTREMENTS.

V.

ARMY SERVICE CORPS—cont^d.Repair of
Accoutre-
ments.

Articles.	Transport Company.	Supply Company.
Carriages , leather, waist belt	staff serjeants { long -	1
	{ short -	1
	all ranks { long -	2
	{ short -	2
Catches { gilding metal gilt, staff serjeants, waist belt -	—	1
	brass, all ranks -	4
Frogs , leather, front parts of -	—	2
Hooks	gilding metal gilt, staff serjeants { snake -	1
	{ side -	1
	brass, all ranks { snake -	4
	{ side -	4
Loops	triangular { gilding metal gilt, staff serjeants, waist belt -	—
	{ brass, serjeants and rank and file, waist belt -	—
	gilding metal gilt, with eye -	—
Rings , brass { braces, valise equipment -	—	1
	waist belt -	1
Runners , leather	carbine sling -	—
	sword knot -	6
	waist belt, all ranks -	6
Slides , brass, for haversacks, sets -	—	6
Straps , leather, black, for valise, 7-in. -	—	8*
Studs	gilding metal gilt, staff serjeants, waist belt -	—
	brass, pouch, serjeant and rank and file -	—

* These straps will answer for chapes to the buckles on the gusset of the valise.

**Lists of
Equip-
ment.**

**VI.—SADDLERY, HARNESS, AND HORSE
APPOINTMENTS.**

1. Lists of Equipment.

2. Lists of Materials for Repair and Preservation.

The saddlery and harness of the Service consist of the articles enumerated in the following lists, and will be supplied in accordance with paragraph 211.

SADDLERY, OFFICERS', Royal Artillery, Royal Engineer Train, and Army Service Corps.

Articles.	Number composing a Set.	Remarks.
Bits { portmouth, with bridle head and curb hooks.	1	
T bridoon, with reins - - -	1	
Breastplate , with neck strap - - -	1	
Cases , horse shoe, single, with straps - - -	2	
Chains , curb - - - - -	1	
Collars , head stall, with browband and throat lash complete.	1	
Cruppers - - - - -	1	
Girths , web, blue - - - - -	2	
Irons , stirrup, single - - - - -	2	
Leathers , stirrup, single - - - - -	2	
Munnahs - - - - -	1	
Pannels , saddle, stuffed - - - pairs	1	
Reins { bridle - - - - -	1	
chain - - - - -	1	In time of peace only.
Saddles , without pannels - - - - -	1	
Skins , lamb { Army Service Corps - - - - -	1	
Royal Artillery and Engineers - - - - -	1	
cloak { centre or valise - - - - -	4	
and wallet - - - - -	2	
Straps { coupling collar chain (billets for collar chain).	1	
girth - - - - -	4	
wallet - - - - -	2	
Surcingles , leather - - - - -	1	
Valises , blue cloth { Royal Artillery - - - - -	1	
Royal Engineers - - - - -	1	
Army Service Corps - - - - -	1	
Wallets , single - - - - -	2	

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

SADDLERY, UNIVERSAL, all Services, Non-commissioned Officers and Men.

Lists of
Equip-
ment.

Articles.	Number of each Article in a set of Saddlery.			Remarks.
	For Cavalry.	For Royal Artillery and Army Service Corps.	For Royal Engineer Train.	
Bits , bridoon, with rein - -	1	1	1	
Breast { pieces, leather, Maude's - plate, with neck strap - -	1	1	1	
Bridles , complete, viz., portmouth bit, with head-rein, curb chain, and hook.	1	1	1	
Buckets , carbine, breech-loading -	1	—	—	} For lance bucket, see Irons, stirrup.
Cases , horse shoe, single - -	2	2	2	
Collars , headstall, with browband and throat lash complete.	1	1	1	
Cruppers - - - -	1	1	1	
Girths - - - -	1	1	—	
Irons , stirrup, single { with lance buckets - without lance buckets - -	2	—	—	} For Lancers.
Leathers , stirrup - - -	2	2	2	
Numnahs - - - -	1	1	1	
Pannels , saddle, stuffed - pairs	1	1	1	
Saddles , universal - - -	1	1	1	
Skins , sheep - - - -	1	1	1	
Straps { carbine, protecting case, shoe, single - cloak { centre - - and wallet - - girth - -	1	—	—	
	2	2	2	
	1	1	1	
	2	2	2	
Supporting , { front Maude's { rear	4	4	—	
	—	2	—	
Trace , breast harness - - -	—	2	—	
Surcingles { lasso, with tugs* - leather - -	—	—	1	
Traces { breast harness, rope - lasso, 20 or 30 feet * - -	1	1	1	
	—	2	—	
Tugs , trace, breast harness and holsters - - -	—	2	—	
Wallets { universal - pairs	—	—	—	} For Lancers and others who carry pistols.
	1	1	1	

* When both lengths are supplied the proportion of 20-foot traces should be $\frac{3}{4}$ ths, that of 30-foot traces $\frac{1}{4}$ ths of the total number in possession. The cavalry receive the 20-foot traces only, in the proportion of 6 per troop during peace, and 8 in time of war.

N.B.—Shabrackets in possession when worn out will not be replaced.

VI. SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

Lists of Equipment.

HARNESS FOR ALL SERVICES.

Articles.	Royal Artillery and Army Service Corps.								Royal Engineer Train.			
	Old Pattern, set.				New Pattern, set.				Old Pattern, set.		New Pattern, set.	
	Wheel.		Lead.		Wheel.		Lead.		Wheel or Lead.		Wheel or Lead.	
	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.
Bands , back and belly - -	-	1	-	-	-	1	-	-	-	1	-	1
Bits { portmouth, each with bridle head, curb chain, and hook.	1	1	1	1	1	1	1	1	1	1	1	1
{ bridoon, with reins - -	1	1	1	1	1	1	1	1	1	1	1	1
Breechings { near complete, with strap.	1	-	-	-	1	-	-	-	1	-	-	-
{ off - - - - -	-	1	-	-	-	1	-	-	-	1	-	-
Cases , horse-shoe - single	2	2	2	2	2	2	2	2	-	-	-	-
Collars { headstall, with brow-band and throat lash complete.	1	1	1	1	1	1	1	1	1	1	1	1
{ neck horse - - -	1	1	1	1	1	1	1	1	1	1	1	1
Cord , forage or heel rope	2	2	2	2	2	2	2	2	2	2	2	2
Cruppers - - - - -	1	1	1	1	1	1	1	1	1	1	1	1
Girths { leather - - - - -	-	-	-	-	1	1	1	1	-	-	-	1
{ web - - - - -	1	1	1	1	-	-	-	-	-	1	-	-
Hames , iron - - - pairs	1	1	1	1	1	1	1	1	1	1	1	1
Irons , stirrup, single	2	-	2	-	2	-	2	-	2	-	2	-
Leathers , stirrup	2	-	2	-	2	-	2	-	2	-	2	-
Leggings , drivers' - -	1	-	1	-	1	-	1	-	1	-	1	-
Munnahs - - - - -	1	1	1	1	1	1	1	1	1	1	1	1
Pannels , saddle, stuffed { drivers' harness, pairs - -	1	1	1	1	1	1	1	1	1	1	1	1
{ luggage - - - - -	-	1	-	1	-	1	-	1	-	1	-	1
Pieces , buckling - -	1	1	1	1	1	1	1	1	1	1	1	1
Reins { bearing, in two parts	1	1	1	1	1	1	1	1	-	-	-	-
{ leading, in two pieces	-	1	-	1	-	1	-	1	-	-	-	-
{ side - - - - -	-	1	-	1	-	1	-	1	-	-	-	-
Saddles , fitted up { drivers' { N.P. O.P.	1	-	1	-	1	-	1	-	-	-	-	-
{ luggage { N.P. O.P.	-	1	-	1	-	1	-	1	-	-	-	1
Skins , sheep, drivers' - -	-	1	-	1	-	1	-	1	-	1	-	1
{ cloak { centre - - -	1	-	1	-	1	-	1	-	1	-	1	-
{ and wallet	2	-	2	-	2	-	2	-	2	-	2	-
{ flank - - - - -	2	2	2	2	2	2	2	2	2	2	2	2
{ girth - - - - -	-	-	-	-	4	4	4	4	-	-	-	4
Straps { hame - - - - -	1	1	1	1	1	1	1	1	1	1	1	1
{ hip - - - - -	-	-	-	-	2	2	2	2	-	-	-	2
{ lasso - - - - -	-	-	-	-	-	-	-	-	2	-	2	-
{ wallet, or holster single	-	2	-	2	-	2	-	2	-	2	-	2
{ wither - - - - -	1	1	1	1	1	1	1	1	1	1	1	1
Surcingles { leather	1	1	1	1	1	1	1	1	1	1	1	1
{ lasso, with tugs	-	-	-	-	-	-	-	-	-	-	-	1
{ lasso, 20' or 30'*	-	-	-	-	-	-	-	-	1	-	-	1
Traces { rope { lead - - - pairs	-	-	1	1	-	-	1	1	-	-	-	-
{ wheel - - - - -	1	1	-	-	1	1	-	-	1	1	-	1
Tugs , back band - - -	-	2	-	-	-	2	-	-	-	2	-	2
Wallets , pairs { drivers' luggage	-	1	-	1	-	1	-	1	-	1	-	1
Whips , drivers' - - -	-	1	-	1	-	1	-	1	-	1	-	1

* The proportion of 20-foot traces should be $\frac{7}{8}$ ths, and that of 30-foot traces $\frac{3}{4}$ ths of the total number in possession.

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

HARNESS FOR ALL SERVICES—cont^d.Lists of
Equip-
ment.

Articles.	Royal Artillery and Army Service Corps.								Royal Engineer Train.			
	Old Pattern, set.				New Pattern, set.				Old Pattern, set.		New Pattern, set.	
	Wheel.		Lead.		Wheel.		Lead.		Wheel or Lead.	Wheel or Lead.		
	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.	Near.	Off.
<i>Extra Articles.</i>												
Bearers, trace - - -	-	-	-	-	-	-	-	-	2	2	2	2
Brushes, harness, hard - -	1	-	1	-	1	-	1	-	1	-	1	-
Straps, kicking, complete, with 2 long and 1 short supporting straps.*	-	-	-	-	-	-	-	-	-	-	-	-
Traces, rope, short, pairs† -	-	-	-	-	-	-	-	-	1	1	1	1

* Kicking straps are supplied in the proportion of 6 per battery (i.e., 1 per sub-division) to Horse and Field Artillery, 1 per troop to the Royal Engineer Train, and 2 per company to the Transport branch of the Army Service Corps.

† Short traces are required for two-thirds of the sets of harness only.

Stable Necessaries.

Supplied in accordance with paragraph 212. For supply to hired horses, see page 125.

Brushes, horse - - -	- 1 per horse.	} Supplied yearly on 1st April.
Combs, curry - - -	- 1 per horse.	
Sponges - - -	- { 1 per riding horse. 2 per draught horse.	
Scissors, pairs - - -	- 1 per horse. Supplied once in five years.	

Horse Appointments.

Supplied in accordance with paragraphs 212 and 223.

Bags, corn { All services with Draught Horses - - -	{ 1 per riding horse, and 1 per pair of draught horses.
Bags, nose - All services - - -	- 1 per horse.
Mallets, wood, heel peg - - -	- 1 for every 8 horses.
Pegs,* wood picketing - - -	- 1 per horse.
Cords,* forage or heel rope - - -	- 2 per horse.
Sacks, corn { Mounted officers of Infantry and Staff. Cavalry - - -	{ 1 per officer. - 1 per horse.
{ Other services - - -	- 1 to 5 horses.
Shackles,* leather, heel - - -	- 1 per horse.

* For proportion issued spare, see p. 132.

VI. SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

Repair and Preservation.

2.—Lists of Materials for Repair and Preservation.

Supplied in accordance with paragraph 338.

The lists of materials in the following pages contain the proportions in which the several articles required for the repair of saddletrees, and for the repair and preservation of saddlery and harness, will be supplied to the regular service at the public expense.

REPAIR OF SADDLETREES.

Articles.	Average Annual Supply of Materials for the Repairs of									
	Saddles with Wood Arches.				Saddles with Iron Arches.					
	Eight Saddle-trees and under.	Twelve Saddle-trees.	Twenty Saddle-trees.	Fifty Saddle-trees.	Eight Sets and under.	Twelve Sets.	Twenty Sets.	Fifty Sets.		
<i>For Universal Saddletrees, Cavalry Pattern.</i>										
Arches	iron	front	-	-	-	-	1	1	1	3
		hind	-	-	-	-	1	1	1	3
Arches	wood	front	1	1	1	3	-	-	-	-
		hind	1	1	1	3	-	-	-	-
Bars, wood, side	near	off	1	1	1	3	1	1	1	3
		off	1	1	1	3	1	1	1	3
Bars, iron, with roller	rivet and roller	-	1	1	1	3	-	-	-	-
Dees	-	-	-	-	-	2	3	5	12	
Glue, common	ozs.	2	3	5	12	-	-	-	-	
Oil, linseed, raw	pints	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	
Paper, glass, sheets	-	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	
Pencils, blacklead, carpenters	-	1	1	1	1	1	1	1	1	
Plates*	Dee	front	-	-	-	-	2	3	5	12
		gullet	1	1	1	3	-	-	-	-
		top, and ring	1	1	1	3	-	-	-	-
Rivets, 2-inch	-	-	-	-	-	2	3	5	12	
Screws, iron,	middling	$1\frac{1}{2}$ inch	1	2	2	6	-	-	-	-
		$1\frac{1}{4}$ "	1	2	2	6	-	-	-	-
		$1\frac{3}{8}$ "	1	2	2	6	-	-	-	-
Staples, iron	cloak	or holster	6	9	15	36	6	9	15	36
		with plates	1	1	1	3	1	1	1	3
		crupper	1	2	2	6	-	-	-	-
Staples, iron	girth	front	1	1	1	3	-	-	-	-
		front	1	1	1	3	-	-	-	-
		girth	1	2	2	6	1	2	2	6
Tongues, wood	-	1	1	1	3	-	-	-	-	
Wedges, wood	-	1	2	2	6	-	-	-	-	
Wire, iron, for rivets, No. 7, W. G.	ozs.	2	3	5	12	1	2	2	6	

* Fan plates may still be required for old pattern saddle-trees.

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

REPAIR OF SADDLETREES—cont^d.

Description of Articles.	Wood Arches.						Iron Arches.									
	Eight Saddletrees.		Twelve Saddletrees.		Twenty Saddletrees.		Fifty Saddletrees.		Eight sets and under.		Twelve sets.		Twenty sets.		Fifty sets.	
	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.	Luggage.	Drivers.
<i>For Luggage and Drivers' Saddletrees, New Pattern Harness.</i>																
Arches { iron { front - - - - - { hind - - - - - { wood { front - - - - - { hind - - - - -	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bars, wood, side { near - - - - - { off - - - - -	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dees - - - - - { crupper for Dees - - - - - { front { inside - - - - - { outside - - - - - { gullet - - - - - { top - - - - - { top and hook with Dees - - - - -	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rings { with bolts - - - - - { with staples - - - - -	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1

Repair and Preservation.

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

REPAIR and PRESERVATION of SADDLERY.

Articles.	Average Annual Supply of Materials for the Repairs of			Remarks.	
	Six Sets of Saddlery.	Eight Sets of Saddlery.	Twelve Sets of Saddlery.		
<i>For Officers' Saddlery.</i>					
Hosses, { bit - - -	1	1	1		
brass { breastplate or crupper	1	1	1		
head collar - - -	1	1	1		
Buckles, brass roller, barred	$1\frac{1}{8}$ - - -	1	1		
	1 - - -	1	1		
	$\frac{7}{8}$ - - -	1	1	2	
	$\frac{3}{4}$ - - -	1	1	2	
Dubbing - - - lbs.	$3\frac{1}{2}$	$4\frac{1}{2}$	$6\frac{3}{4}$		
Facings, lambskins, sets	Royal Artillery -	1	1	2	
	Army Service Corps	1	1	2	
Fittings for saddletrees	burs, brass - - -	2	3	4	
	flaps - - -	-	-	-	
	rivets, { long - - -	2	2	3	
	copper { short - - -	2	3	4	
seats, saddle - - -	-	-	-		
Flock, white - - - lbs.	3	4	6		
Hides, { backs, bridle - - -	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	} Or leather, pieces of.	
	brown { bag, or cloak - - -	$\frac{3}{2}$	$\frac{3}{2}$		$\frac{1}{6}$
Leather, pieces of, new and part worn - - - lbs.	-	-	-	} In lieu of hides, or of part of do.	
Mountings, brass, for saddletrees	cantles - - -	1	1		2
	plates { crupper - - -	1	1	2	
		front with ring - - -	1	1	2
		top - - -	1	1	2
	screws { fine, $\frac{1}{2}$ " - - -	2	3	4	
		strong, $\frac{3}{8}$ " - - -	2	3	4
	staples { crupper - - -	1	1	2	
		front - - -	1	1	2
	washers	valise and wallet	3	4	6
		- - -	1	1	2
Nails, brass - - -	2	3	4		
Wumnah { cuttings - - - lbs.	1	$1\frac{1}{2}$	2	} * Serge linings cut to shape are supplied in the proportion of 2 prs. to $1\frac{1}{2}$ yards.	
	or felt - - - yards	$\frac{1}{4}$	$\frac{3}{8}$		$\frac{1}{2}$
Pins, cantle, brass - - -	2	4	6		
Rings, brass	$1\frac{1}{2}$ inch - - -	1	1	1	
	$1\frac{1}{4}$ " - - -	1	1	1	
Serge, collarmakers - - yards	1	$1\frac{1}{2}$	2*		
Skins, lamb - - -	1	1	2		
Soap, soft - - -	-	-	-	†	
Squares, head collar, brass -	1	1	1		
Staples, brass - - -	6	8	12		
Thread { black, 3 cord - - - ozs.	$1\frac{1}{2}$	2	3	† $\frac{1}{4}$ lb. monthly per set of saddlery, or $\frac{1}{2}$ lb. of hard soap.	
	flax - - -	4	6		
	whited brown - - -	$1\frac{1}{3}$	2		3
Twine, quilting - - -	2	4	6		
Wax { bees - - -	1	1	2		
	black - - -	2	4	6	
Web, blue, worsted - - - yards	6	8	12		
<i>Parts of</i>					
Hooks, curb	{ near - - -	1	1	1	
	{ off - - -	1	1	1	

Repair and Preservation.

VI. SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

Repair and Preservation.

REPAIR AND PRESERVATION OF SADDLERY—cont^d.

Articles.	Average Annual Supply of Materials for Repairs of					Remarks.		
	5	8	12	20	50			
	Sets of Saddlery.							
<i>For Universal Saddlery.</i>								
Basils , brown, strained -	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{3}{4}$	$1\frac{1}{4}$	3			
Bosses , { bit -	1	1	1	2	3			
{ breastplate and crupper -	1	1	1	2	3			
Buckles {	brass, 1 inch -	1	1	1	2	5	For seats of saddles, with iron arches.	
	iron roller {	barred { $1\frac{1}{2}$ inch -	1	1	1	2		5
		{ 1 " " -	2	2	3	5	12	
		{ single, $1\frac{1}{4}$ inch -	1	1	1	2	5	
	{ stirrup, leather, $1\frac{1}{4}$ -in. -	1	1	1	2	5		
	tinned {	3 inch -	1	1	1	1	3	For sheep skins.
		1 " " -	1	1	1	1	3	
Buckles , iron, tinned, inlet $\frac{3}{4}$ -inch -	1	1	1	1	3	For nosebags, as required.		
Chapes , with buckles, nosebags -	1	1	2	3	7	For numnahs.		
Cordovan , - lbs.	—	—	—	$1\frac{1}{2}$	1	Hussars only.		
Dubbing -	3	$4\frac{1}{2}$	$6\frac{3}{4}$	$11\frac{1}{2}$	28			
Eyelets , brass -	—	—	—	—	—	For nosebags, as required.		
Flour , for paste -	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$			
Hair , horse -	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	6	14	Pieces of new or part-worn leather are issuable in lieu of hides, weight for weight.		
Hides {	brown {	backs {	bridle -	$\frac{1}{16}$	$\frac{1}{8}$		$\frac{1}{4}$	$\frac{1}{2}$
		of {	collar -	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	
		bag or cloak -	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$		
		bellies of -	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$		
shoulders of -	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$				
bullock, sundried -	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1	Engineer Train.		
Ink , for marking - pints	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1			
{ brown, for lining yds.	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1	For sheepskins.		
Linen {	worn, for {	corn sacks, lbs.	$\frac{5}{8}$	1	$1\frac{1}{2}$	$2\frac{1}{2}$	$6\frac{1}{4}$	
		nose bags, lbs.	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$3\frac{1}{8}$	
		repairing -	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$3\frac{1}{8}$	
Nails , iron tacks, Flemish black, No. 83. - lbs.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$1\frac{1}{4}$			
Numnah {	cuttings " -	1	$1\frac{1}{4}$	2	3	7	Both cuttings & felt are not supplied.	
	felt - yards	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$1\frac{1}{4}$		
Rings , iron, $1\frac{1}{4}$ inch -	1	1	1	1	2			
Saddle fittings {	burr, iron galvanized flaps -	pairs -	1	1	1	1	2	
		girths, leather, O.P. -	1	1	1	2	4	
		rivets, copper {	long -	2	2	3	5	12
			short -	2	3	5	8	18
		screws for flaps, $\frac{1}{8}$ in. -	4	6	9	15	36	
		seats -	1	1	1	2	3	
		tabs -	1	1	1	2	3	
		thongs, lacing -	2	2	2	4	10	
		Serge , collarmakers, 15 ozs. per yard, 40 in. yds.	1	$1\frac{1}{2}$	2	3	8*	* Serge linings cut to shape are supplied in the proportion of 2 pairs to $1\frac{1}{2}$ yards.
		Skins , sheep, black -	$\frac{1}{4}$	$\frac{1}{2}$	1	$1\frac{1}{4}$	3	

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

REPAIR AND PRESERVATION OF SADDLERY—cont^d.

Repair and Preservation.

Articles.	Average Annual Supply of Materials for Repairs of					Remarks.
	5	8	12	20	50	
	Sets of Saddlery.					
<i>Universal Saddlery—cont.</i>						
Soap, soft	—	—	—	—	—	† $\frac{1}{4}$ lb. monthly per set of saddlery for Field Artillery and Engineer Train, or $\frac{1}{4}$ lb. of hard soap.
Squares, head collar, iron	1	1	1	2	5	
Straps web for nose bags, with eyelets	1	1	2	3	7	
Studs, { carbine bucket - { wallets or head-brass { collar -	1	1	1	1	2	
	2	2	3	5	12	
Thread { black 3-cord lbs. ozs. { flax " " " { whited brown " "	0 1	0 2	0 2	0 4	0 8	
	0 4	0 5	0 8	0 12	2 0	
	0 1	0 2	0 2	0 4	0 8	
Tugs, lasso	—	—	—	—	—	5 per regiment of Cavalry.
Twine, quilting lbs. ozs.	0 2	0 3	0 4	0 8	1 0	
Wax { bees " " " { black " " "	0 1	0 1	0 1	0 2	0 4	
	0 2	0 3	0 4	0 8	1 0	
Web { diaper, 2 in. yards { straining, 3 in. " " { 1 $\frac{1}{2}$ in. " " { 1 $\frac{1}{8}$ in. " "	$\frac{3}{4}$ $\frac{3}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$ $\frac{3}{4}$	2 $\frac{1}{2}$ 1 $\frac{1}{4}$	6 3	
	—	—	—	—	—	{ For nosebags, as required.
<i>Parts of</i>						
Bits, bridoon	1	1	1	2	3	
Chains, curb	1	1	1	2	5	
Hooks { curb - { lasso -	1	1	1	2	5	
	—	—	—	—	—	1 per troop.
<i>Additional for Armourer-Serjeants of Cavalry Regiments.</i>						
Borax - - - ozs.	0 1	0 1 $\frac{3}{4}$	0 2 $\frac{1}{4}$	0 4	0 10	
Burrs, copper	2	3	5	8	20	{ For studs of breastplates and cruppers. For ports of bits.
Iron { bolt, $\frac{3}{8}$ in. - lbs. ozs. { flat, $\frac{3}{4}$ in \times $\frac{1}{4}$ in. " "	0 2 $\frac{1}{2}$	0 4	0 6	0 10	1 9	{ For sides of bits, T's of bridoons.
	0 0 $\frac{3}{4}$	0 2	0 3	0 5	0 13	
Spelter - - - ozs.	0 1 $\frac{1}{2}$	0 2 $\frac{1}{2}$	0 3 $\frac{1}{2}$	0 6	0 15	
Wire { copper { No.1, W.G. " " { " 7, " " " { " 17, " " " { " 1, " " " { iron { " 4, " " " { " 5, " " " { " 7, " " "	0 0 $\frac{3}{4}$	0 2	0 3	0 5	0 12 $\frac{1}{2}$	{ For studs of bit bosses.
	0 0 $\frac{1}{2}$	0 1	0 1 $\frac{1}{4}$	0 2	0 5	{ For studs of breastplate and crupper bosses.
	0 0 $\frac{1}{2}$	0 1	0 1 $\frac{1}{4}$	0 2	0 5	For ornaments.
	0 0 $\frac{3}{4}$	0 2	0 3	0 5	0 13	{ For bottom bars of bits.
	0 2 $\frac{1}{2}$	0 4	0 6	0 10	1 9	{ For bridoon rings.
	0 2 $\frac{1}{2}$	0 4	0 6	0 10	1 9	{ For bit rings, and lance buckets.
	0 0 $\frac{3}{4}$	0 2	0 3	0 5	0 12 $\frac{1}{2}$	{ For curb chains and hooks.

SADDLERY, HARNESS, AND HORSE APPOINTMENTS.

VI.

REPAIR AND PRESERVATION OF HARNESS—cont^d.

Repair and Preservation.

Articles.	Average Annual Supply of Materials for the Repairs of										Remarks.															
	5					8						12					20					50				
	Double Sets of Harness.																									
	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.	Old Pattern.	New Pattern.						
<i>For Drivers' Harness—cont.</i>																										
Serge ,* collarmakers, 15 ozs. per yard, 40-inch, yds.	2	2	2½	2½	4	4	6½	6½	16	16	} ½lb. monthly per single set of harness, or ¼lb. of hard soap.															
Soap , soft - lbs.	90	90	144	144	216	216	360	360	900	900																
Skins , sheep, black -	½	½	½	½	1	1	1½	1½	3	3																
Squares , head collar, iron	2	2	2	2	2	2	4	4	10	10																
Studs , brass, wallet or head collar -	—	3	—	5	—	7	—	10	—	24																
Thread { black, 3-cord lbs. ozs.	0	2	0	2	0	4	0	4	0	6	0	6	0	8	0	8	1	0	1	0						
collar - " "	0	6	0	6	0	9	0	9	0	12	0	12	1	4	1	4	3	0	3	0						
flax { coarse " "	0	8	0	8	0	14	0	14	1	4	1	4	2	2	2	2	5	0	5	0						
fine " "	0	8	0	8	0	14	0	14	1	4	1	4	2	2	2	2	5	0	5	0						
whited brown " "	0	2	0	2	0	4	0	4	0	6	0	6	0	8	0	8	1	0	1	0						
Twine , quilting - " "	0	6	0	6	0	9	0	9	0	12	0	12	1	4	1	4	3	0	3	0						
Wax { bees " "	0	2	0	2	0	3	0	3	0	4	0	4	0	7	0	7	1	0	1	0						
black " "	0	8	0	8	1	0	1	0	1	4	1	4	2	0	2	0	5	0	5	0						
Web { diaper, 2-in. yds.	1½	1½	2	2	3	3	5	5	12	12																
hemp, girth, 3½-inch - " "	1½	—	2½	—	4	—	6½	—	16	—																
straining, 3-inch - " "	—	½	—	1	—	1½	—	2½	—	6																
<i>Parts of</i>																										
Bits , bridoon - -	1	1	1	1	2	2	3	3	7	7																
Chains , curb - -	2	2	2	2	2	2	4	4	9	9																
curb - -	2	2	2	2	2	2	4	4	10	10																
Hooks { curb - -	—	—	—	—	1	1	2	2	4	4																
trace - -	—	—	—	—	—	—	—	—	—	—																

* With regard to serge, linings cut to shape can be supplied in the proportion of 2 pairs for drivers' saddles in lieu of 1½ yards, and 2 pairs for luggage saddles in lieu of ¾th of a yard.

SADDLERY, HARNESS, AND HORSE APPAREL.

TOOLS.

REPAIR AND PURCHASES OF EQUIPMENT.

Field Service.

Articles.	Average Annual Supply of the Material (based on)				
	1	2	3	4	5

For Drivers' Harness—cont.

Serge,* collar-makers, 15 ozs. per yard, 40-inch, yds.	2	2	2	2	2						
Soap, soft - - - lbs.	90	144	144	144	144						
Skins, sheep, black -	1	1	1	1	1						
Squares, head collar, iron	2	2	2	2	2						
Studs, brass, wallet or head collar -	-	3	3	3	3						
Thread	black, 3-cord collar - - - lbs. ozs.	0	2	0	4	0	4	0	4	0	4
	flax coarse - - -	0	8	0	8	0	8	0	8	0	8
	flax fine - - -	0	8	0	8	0	8	0	8	0	8
	whitened brown - - -	0	2	0	2	0	2	0	2	0	2
Twine, quilting - - -	0	6	0	6	0	6	0	6	0	6	
Wax	bees - - -	0	2	0	2	0	2	0	2	0	2
	black - - -	0	8	0	8	0	8	0	8	0	8
Web	diaper, 2-in. yds.	1½	1½	2	2	2	2	2	2	2	
	hemp, girth, 3½-inch -	1½	-	1½	-	1½	-	1½	-	1½	
	straining, 3-inch -	-	-	1	-	1	-	1	-	1	
<i>Parts of</i>											
Bits, bridoon - - -	1	1	1	1	1						
Chains, curb - - -	1	1	1	1	1						
Hooks { curb - - -	1	1	1	1	1						
{ trace - - -	1	1	1	1	1						

* With regard to serge, linings cut to shape can be applied to the drivers' saddles in lieu of 1½ yards, and 2 pairs for horse apparel.

Brigade.

- 1 per horse.
- See page 109.
- 5 per tarred rope.
- 4 per white rope.
- 1 per 15 horses
or
- 1 per 9 horses.
- 1 for servants and
orderlies.
- See page 109.
- 1 to each office tent.

- 1 to General Officer
Commanding, and
- 1 to each office.

- 1 Major or Brig-
adier-General.
- 1 for staff field
officers and officers
ranking as such.
- 1 for every 2 other
staff officers.
- 1 Commissary of
brigade and office.

- 1 Brigade guard.

- 1 servants and ord-
nary of Major or
Brigadier-General.
- 1 servants and ord-
nary, every 2
staff field officers.
- 1 servants and ord-
nary, every 2
staff officers.

11 pairs of girths, and 1 bag
for each pair, containing 1 roll
of 100 yards of 1-inch
webbing, 1 roll of 100 yards
of 1-inch webbing, and 2 dozen
of 1-inch webbing, 1 dozen
of 1-inch webbing, and 1 dozen
of 1-inch webbing.

**Field
Service.**

VII.—CAMP EQUIPMENT AND ENTRENCHING TOOLS.

- 1. Field Service.**
2. Standing Camps.

Supplied in accordance with paragraph 217.

Proportions for General Staff.

Articles.	Division.	Brigade.	
CAMP EQUIPMENT.			
Axes { felling, 4½ lbs., helved - -	5 (2 for police) -	1.	
hand, 2 lbs., handled - -	21 (2 for police) -	5.	
grey, field service .. -	1 per non-commissioned officer and man, and for officers' servants.	1 per non-commissioned officer and man, and for officers' servants.	
Blankets { horse, or rugs, with pads and surcingle. -	1 per horse, public property.	1 per horse, public property.	
Buckets, leather, cavalry - -	1 per non-commissioned officer and men's tent.	1 per non-commissioned officer and men's tent.	
Candlesticks, reading globe - -	1 per General Officer Commanding, and 1 for each office.	1 per General Officer Commanding, and 1 for each office.	
Cases, tin, for stationery - -	1 each for General Officer Commanding, Adjutant-General, Quartermaster - General, and Commissaries General.	1 for General Officer Commanding, and 1 for Brigade Major.	
Chairs, camp, folding - -	1 for General Officer Commanding.	1 for General Officer Commanding.	
Cords, forage or heel rope - -	See page 109 -	See page 109.	
Covers, waterproof, horse or saddle -	1 per set of saddlery.	1 per set of saddlery.	
Flags, distinguishing, with poles. {	blue { divisional - -	1 per supply depôt	
	brigade - -	—	
	red { divisional - -	1 for General Officer Commanding.	1 per supply depôt.
	brigade - -	—	—
Hooks, handled, reaping - -	1 per 8 mounted non-commissioned officers and men.	1 per 8 mounted non-commissioned officers and men.	
Kettles, camp, Torrens, with bags and straps.	1 per 5 non-commissioned officers and men, including officers' servants.	1 per 5 non-commissioned officers and men, including officers' servants.	
Lanterns, distinguishing {	green - -	1 per supply depôt.	
	red - -	2 for General Officer Commanding.	1 per supply depôt. 1 for General Officer Commanding.
Mallets, helved, for pegs - -	See page 109.	See page 109.	
Mauls, common, helved - -	1 for 2 ropes or less.	1 for 2 ropes or less.	

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

PROPORTIONS FOR GENERAL STAFF—cont^d.Field
Service.

Articles.	Division.	Brigade.
Nets, forage - - - pairs	1 per horse -	1 per horse.
Pegs, wood, heel rope - - -	See page 109 -	See page 109.
Posts, wood, picket, 2½ feet - - -	6 per tarred rope -	6 per tarred rope.
	4 per white rope -	4 per white rope.
Ropes, picket, 3-inch { tarred, 25 yds.	1 per 15 horses	1 per 15 horses
	or	or
	1 per 9 horses	1 per 9 horses.
Screens, latrine, complete* - - -	1 for servants and orderlies.	1 for servants and orderlies.
Shackles, leather, heel rope - - -	See page 109 -	See page 109.
Stools, camp, folding - - -	1 to each Assistant Adjutant and Quartermaster-General, and 1 to each office tent.	1 to each office tent.
Tables, camp, folding - - -	1 to General Officer Commanding, 1 to each Assistant Adjutant and Quartermaster-General, and 1 to each office.	1 to General Officer Commanding, and 1 to each office.
	1 Lieutenant-General.†	1 Major or Brigadier-General.
	1 for staff field officers and officers ranking as such.	1 for staff field officers and officers ranking as such.
	1 for every 2 other staff officers.	1 for every 2 other staff officers.
	1 each for Commissary General, Principal Medical Officer, Staff Veterinary Surgeon, and Senior Chaplain (and office).	1 Commissary of brigade and office.
Tents, circular, complete‡ - - -	1 for Assistant Provost-Marshal and office.	1 Brigade guard.
	1 division guard -	1 servants and saddle of Major or Brigadier-General.
	3 for Police, mounted and dismounted.	1 servants and saddle, every 2 staff field officers.
	1 for prisoners -	1 servants and saddle, every 3 staff officers.

* Only for flying columns.

† Officer's marquee for Lieutenant-General.

‡ Each circular tent is complete with 1 valise, 1 pole, in 2 pieces, and 1 bag containing 42 pins and 2 mallets. Each officer's marquee is complete with 1 valise, 1 bundle of poles, and 1 bag containing 4 large pins, 96 small pins, and 2 mallets.

N.B.—The bundle of poles consists of 1 ridge pole, 2 upright poles, and 2 door poles, each in 2 pieces. Each hospital marquee is complete with 1 valise, 1 bundle of poles, 1 bag containing 4 large and 180 small pins and 2 mallets and 1 bottom.

VII. CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Field Service.

PROPORTIONS FOR GENERAL STAFF—cont^d.

Articles.	Division.	Brigade.
	1 servants and saddlery, Lieutenant-General.	1 for brigade office.
	1 servants and saddlery, every 2 staff field officers.	—
	1 servants and saddlery, every 3 other staff officers.	—
	1 for Assistant Adjutant and Quartermaster General's office.	—
Tents, circular, complete* -	1 for staff clerks -	1 latrine for officers. †
	1 for each Commissary General's office.	—
	1 for Principal Medical officer's office, clerk, orderly, and servants.	(Brigade - major's clerks to be accommodated in servants' tents.)
	1 for Staff Veterinary Surgeon's office.	—
	1 latrine for officers †	—
TOOLS, INTRENCHING.		
Axes, pick, 5 or 6½ lbs., helved -	5 (2 for police) -	1.
Shovels, helved - -	3 - -	1.
Spades, helved - -	3 - -	1.
HORSE APPOINTMENTS.		
Bags, nose - - -	See page 109 -	See page 109.
Sacks, corn, 5 bushel - -	Do. -	Do.

* See preceding page. † Flying columns only.
 NOTE.—Officers' horses, not the property of the public, will receive only the articles allowed under paragraph 223.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

Proportions for all Services, with the exception of the General Staff.

The field service equipment of the carriages of batteries of Horse and Field Artillery of the Royal Engineer train and Transport Companies of the Army Service Corps includes a complete supply of felling axes, pick axes, water buckets, bill hooks, reaping hooks, camp kettles, lanterns, mauls, picket posts, picket ropes, shovels, spades, and tents.

Articles.	Regiments of Cavalry.	Garrison Batteries Royal Artillery, Regiments of Infantry, Companies Royal Engineers, and Supply Companies Army Service Corps.	Batteries Royal Horse Artillery.	Field Batteries Royal Artillery, Troops Royal Engineer Train and Army Service Corps Transport Companies.
CAMP EQUIPMENT.				
felling, 4½ lbs. helved	5 per regiment	16 per regiment, 1 per battery and 1 per company R.E., and A.S.C.	Equipment	Equipment.
Axes, { hand, 2 lbs. handled	29 " "	66 per regiment, 2 per 15 non-commissioned officers and men, R.A., R.E., and A.S.C.	Nil.	Nil.
Blankets { grey, field service	1 per non-commissioned officer and man.	1 per non-commissioned officer and man.	Equipment	Equipment.
horse, or rugs, with pads and surcingle.	1 per troop horse, public property.	Nil.	1 per troop horse public property.	1 per troop horse public property.
Buckets, leather, cavalry	2 per non-commissioned officers and men's tent.	1 per non-commissioned officers, and men's tent.	Equipment	Equipment.
Cords, forage or heel rope	See page 109	See page 109	See page 109	See page 109.
Covers, waterproof horse or saddle	1 to every set of saddle or harness.	Nil.	1 to every set of saddle or harness.	1 to every set of saddle or harness.

NOTE.—Officers' horses not the property of the public are supplied in accordance with paragraph 223. Flying columns draw field service proportions.

Field Service.

VII.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Field Service.

PROPORTION FOR ALL SERVICES, GENERAL STAFF EXCEPTED—cont'd.

Articles.	Regiments of Cavalry.	Garrison Batteries Royal Artillery, Regiments of Infantry, Companies Royal Engineers, and Supply Companies Army Service Corps.	Batteries Royal Horse Artillery.	Field Batteries Royal Artillery, Troops Royal Engineer Train and Army Service Corps Transport Companies.
Hooks { handled, bill	-	66 per regiment, or 1 to 15 non-commissioned officers or men, R.A., B.E., or A.S.C.	-	Equipment.
reaping -	29 per regiment	Nil.	Equipment	Do.
camp, Flanders {	1 per 8 non-commissioned officers and men.	3 for staff sergeants -	Do.	Do.
camp, Torrens {	2 for staff sergeants -	1 for 5 non-commissioned officers and men.	Equipment	Equipment.
Kettles -	1 for 5 non-commissioned officers and men.	Nil.	See page 109	See page 109.
Lanterns , brass, globular -	4 per regiment	See page 109 -	Equipment	Equipment.
Mallets , helved, for pegs -	See page 109 -	1 per regiment -	See page 109	See page 109.
Maps , common, helved* -	2 per troop -	1 per mounted officer's horse.	Equipment	Equipment.
Nets , forage, pairs -	1 per horse -	See page 109 -	1 per horse -	1 per horse.
Pegs , wood, heel rope -	See page 109 -	6 for tarred, or 4 for white rope.	See page 109	See page 109.
Posts , wood, picket,* 2½ feet -	6 for tarred, or 4 for white rope.	1 for 15 horses -	Equipment	Equipment.
Ropes , picket,* 3 inch { tarred, 25 yards	1 for 15 horses -	1 for 9 horses -	Do	Do.
white, 16 "	or	1 per regiment, 1 per battery, R.A., or company, R.E., or A.S.C.	1 per battery	1 per battery, troop, or company.
Scoreons , latrine, complete -	1 per regiment -	See page 109 -	See page 109	See page 109.
Shackles , leather, heel rope -	See page 109 -	-	See page 109	See page 109.

NOTE.—Flanders camp kettles, when supplied, are issued in the proportion of one for 8 non-commissioned officers and men.
 * These articles will be carried for the Cavalry on service. When the store of 16 yard ropes has been used up, tarred ropes of 25 yards will be supplied to Cavalry in the proportion given in the Table.
 † Flying columns only at manoeuvres.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

PROPORTION FOR ALL SERVICES, GENERAL STAFF EXCEPTED—cont.

Articles.	Regiments of Cavalry.	Garrison Batteries Royal Artillery, Regiments of Infantry, Companies Royal Engineers, and Supply Companies Army Service Corps.	Batteries Royal Horse Artillery.	Field Batteries Royal Artillery, Troops Royal Engineer Train and Army Service Corps Transport Companies.
<p>Tents, circular, and tent appurtenances - - - - -</p>	<p>1 Officer commanding - 1 to Major - - 1 per troop for officers - 1 to Paymaster and Quartermaster. 1 to Medical Officer - 1 for Adjutant and Veterinary surgeon. 1 to staff sergeants - 1 to 12 for all other non-commissioned officers and men.* 4 for guards - - 2 for officer's servants -</p>	<p>1 to Officer commanding 1 to 2 Majors - - 1 for Medical Officer for regiment. - - 1 for Paymaster and Quartermaster per regiment. 1 for Adjutant and office per regiment. 1 per Battery or Company for officers. 4 for guards per regiment. 1 per battery R.A., or company R.E. or A.S.C. 1 for staff sergeants per regiment. 1 per 15 non-commissioned officers and men exclusive of staff sergeants.</p>	<p>Equipment - - - - -</p>	<p>Equipment.</p>

* In the case of the Household Cavalry, 1 per 8 non-commissioned officers and men

Field Service.

VIII.

TOOLS.

Field Service.

PROPORTION FOR ALL SERVICES, GENERAL STAFF EXCEPTED—contd.

Articles.	Regiments of Cavalry.	Garrison Batteries Royal Artillery, Recipients of Infantry, Companies Royal Engineers, and Supply Companies Army Service Corps.	Batteries Royal Horse Artillery.	Field Batteries Royal Artillery, Troops Royal Engineer Train and Army Service Corps Transport Companies.
Tents, circular, and tent appurtenances -	*1 latrine for officers -	1 for servant of mounted officers, 1* latrine for officers.	Equipment -	Equipment.
TOOLS ENTRENCHING.				
Axes, pick, 5 to 6½ lbs. helved -	13 per regiment -	60 per regiment, 1 per battery R.A., company R.E., or A.S.C.	Equipment -	Equipment.
Bars, crow { 4½ feet 5½ " -	2 " " - 2 " " -	2 per regiment - 2 " " -	Nil. Nil.	Nil. Nil.
Shovels, helved -	13 " " -	100 per regiment, 1 per battery R.A., company R.E., or A.S.C.	Equipment -	Equipment.
Spades, helved -	13 " " -	10 per regiment, 1 per battery R.A., 1 per company R.E., or A.S.C.	Do.	Do.
HORSE APPOINTMENTS.				
Bags, nose -	See page 109 -	See page 109 -	See page 109 -	See page 109.
Sacks, corn, 5 bushel -	See page 109 -	See page 109 -	See page 109 -	See page 109.

* Flying columns only.

CAMP EQUIPMENT AND ENTRENCHING TOOLS:

VII.

PROPORTION FOR ALL SERVICES, GENERAL STAFF EXCEPTED.

Articles.	Regiments of Cavalry.	Garrison Batteries Royal Artillery, Regiments of Infantry, Companies Royal Engineers, and Supply Companies Army Service Corps.	Batteries, Royal Horse Artillery.	Field Batteries Royal Artillery, Troops Royal Engineer Train and Army Service Corps Transport Companies.
MISCELLANEOUS STORES.				
blocks, chopping*	1 per regiment -	1 per regiment or corps	1 per battery -	1 per battery, troop, or company.
choppers -	1 "	1 "	1 "	1 per battery, troop, or company.
cleavers -	1 "	1 "	1 "	1 per battery, troop, or company.
knives -	1 "	1 "	1 "	1 per battery, troop, or company.
machine weighing 28 lbs.	1 "	1 "	1 "	1 per battery, troop, or company.
saws, iron back -	1 "	1 "	1 "	1 per battery, troop, or company.
steels -	1 "	1 "	1 "	1 per battery, troop, or company.
weights (14 lbs. to $\frac{1}{4}$ oz.) sets 1	1 "	1 "	1 "	1 per battery, troop, or company.
Implements, butchers.				

* Or covers blanket unserviceable.

NOTE.—Horses attached to infantry, if hired, are entitled to 1 horse brush, 1 curry comb, and 1 sponge, for every two horses, and a nose bag for each horse, as well as a blanket, pad, and surcingle, and a pair of nets. If belonging to Army Service Corps or other mounted services the articles would, as well as the equipment, accompany the horses.

Field
Service.

VII. CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Standing Camps.

Standing Camps—ALL SERVICES.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, and Infantry, and Supply and Store Companies, Army Service Corps.
CAMP EQUIPMENT.					
Axes { felling, 4½ lbs., helved hand, 2 lbs. handled	—	Equipment	Equipment	Equipment	1 per battery or company.
	1 for 15 non-commissioned officers and men.	2 per non-commissioned officers and men.*	2 per non-commissioned officers and men.	2 per non-commissioned officers and men.	1 for 15 non-commissioned officers and men.
Blankets { grey, field service horse, or rugs, with pads and sureingles.	2 per non-commissioned officers and men.	2 per non-commissioned officers and men.*	2 per non-commissioned officers and men.	2 per non-commissioned officers and men.	2 per non-commissioned officers and men.
	1 per horse, the property of the public.	1 per horse, the property of the public.	1 per horse, the property of the public.	1 per horse, the property of the public.	Nil.
Buckets, leather, cavalry	10 per troop; 2 for guards, and 2 spare per regiment.	Equipment	Equipment	Equipment	1 per non-commissioned officers and men's tent.
Colors, camp, with flags, cases, and poles	4 per regiment	4 per battery	4 per troop	4 per company	4 per battery, per company R.E., if encamped by themselves, and 4 per regiment.

* Including those in possession.
NOTE.—Flying columns draw field service proportions.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

ALL SERVICES—cont'd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, and Infantry, and Supply and Store Companies, Army Service Corps.
Cords, forage, or heel rope - - -	See page 109 - 1 per horse blanket.	See page 109 - 1 per horse blanket.	See page 109 - 1 per horse blanket.	See page 109 - 1 per horse blanket.	See page 109. 1 per mounted officer.
Covers, waterproof, horse or saddle† - - -	1 per set of saddle- driery.	1 per set of saddle- driery or harness. Equipment -	1 per set of saddle- driery or harness. Equipment -	1 per set of saddle- driery or harness. Equipment -	Nil. 1 to 15 non-com- missioned officers and men.
Hooks, handled { bill reaping Flanders	1 per 15 non-com- missioned officers and men. Nil. Nil.	Do. Equipment, or 1 per 8 non-com- missioned offi- cers and men. Nil.	Do. Equipment, or 1 per 8 non-com- missioned offi- cers and men. Nil.	Do. Equipment, or 1 per 8 non-com- missioned offi- cers and men. Nil.	Nil. Nil.
Kettles, camp { Torrens	1 to 5 non-com- missioned offi- cers and men. 2 per regiment, and 2 for guards.	2 per battery equipment.	2 per troop	2 per company	1 to 5 non-com- missioned officers and men. 1 per battery, 4 per regiment, 1 per com- pany R.E. and A.S.C. 2 per regiment. 1 per regiment. 1 per mounted officer. See page 109. 5 per rope.
Lanterns, brass, globular* - - -	-	Equipment -	Equipment -	Equipment -	-
Mallets, helved, for pegs - - -	Equipment -	Equipment -	Equipment -	Equipment -	-
Mauls, common, helved - - -	2 per troop	Equipment -	2 per troop	2 per company	-
 Nets, forage (if required) - - -	pairs	1 per horse	1 per horse	1 per company	-
Pegs, wood, heel rope - - -	See page 109 -	See page 109 -	See page 109 -	See page 109 -	See page 109.
Posts, wood, picket, 3/4 feet - - -	4 per 16 yard rope, 6 per 25 yard rope.	Equipment -	Equipment -	Equipment -	-

* These lanterns require oil (colza or rape), and wick (common cotton), which are supplied by the Commissaries of supply on requisition.

† When tents are not supplied.

Standing
Camps.

VII. CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Standin Camps.

ALL SERVICES—cont'd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, Infantry, and Supply and Store Companies, Army Service Corps.
Ropes, picket, 3-inch { tarred, 25 yards white, 16 yards	1 for 15 horses or 1 for 9 horses -	Equipment -	Equipment -	Equipment -	1 of 16 yards per regiment or corps separately encamped.
Shackles, leather, heel rope	See page 109 -	See page 109 -	See page 109 -	See page 109 -	See page 109.
Stones, rag or rub - -	6 per regiment -	2 per battery -	2 per troop -	2 per company -	6 per regiment, 2 per battery or company, R.E. and A.S.C.
Stoves, Soyers', 12 gallons { officers' mess - serjeants' mess - veterinary surgery -	1 per regiment - 1 " " - 1 " " -	1 per battery - 1 " " - 1 " 2 batteries -	1 per troop - 1 " " - 1 " 2 troops -	1 per company - 1 " " - —	1 per battery, regiment, or company, R.E. or A.S.C. 1 per battery, regiment, or company, R.E. or A.S.C. 1 of each for company R.E. or A.S.C.
Tents, complete,* circular, single, linen	2 per field officer 1 for each other officer. 1 per 2 staff serjeants.	2 per field officer 1 for each other officer. 1 to 2 staff serjeants.	2 per field officer 1 for each other officer. 1 to 2 staff serjeants.	2 per field officer 1 for each other officer. 1 per 2 staff serjeants.	2 per field officer. 1 for each other officer. 1 per 2 staff serjeants.

* Each circular tent is complete with 1 valise, 1 pole in two pieces, and 1 bag containing 42 pins and 2 mallets. Each officer's marquee is complete with 1 valise, 1 bundle of poles, and 2 mallets. N.B.—The bundle of poles consists of 1 ridge pole, 2 upright poles, and 2 door poles, each in two pieces. Each hospital marquee is complete with 1 valise, 1 bundle of poles, 1 bag containing 4 large and 180 small pins, and 2 mallets, and 1 bottom. Field officers in command of 2 or more batteries, with their staff, will draw camp equipment, according to rank. They will be allowed one tent for their own servants, together with those of their staff.
Note.—Each regimental field officer, or departmental officer ranking as such, receives, when in standing camp, one officers' marquee, or two circular tents.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

ALL SERVICES—contd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, and Infantry and Supply and Store Companies, Army Service Corps.
<p>Tents, complete,* circular, single, linen</p>	<p>1 per 12 non-commissioned officers and men. 4 for guards - 1 for orderly room</p>	<p>1 to 12 non-commissioned officers and men. 3 for guards - 2 per battery for officers' servants.</p>	<p>1 to 12 non-commissioned officers and men. 3 for guards - 2 per troop for officers' servants.</p>	<p>1 to 12 non-commissioned officers and men. 1 for guards - 1 for company for officers' servants.</p>	<p>1 per 12 non-commissioned officers and men. 1 per regiment for pay office. 1 per regiment for orderly room.</p>
	<p>1 for pay office - 1 for quarter-master's stores.</p>	<p>1 for messman's stores and mess servants. 1 for orderly room</p>	<p>1 for messman's stores and mess servants. 1 for orderly room</p>	<p>1 for messman's stores and mess servants. 1 for orderly room</p>	<p>1 per regiment for quartermasters' stores. 4 per regiment, 1 per battery, and 1 per company, R.E. and A.S.C., for guards.</p>
	<p>2 per troop for saddlery. 1 for veterinary surgery.</p>	<p>1 for veterinary surgery. 1 for quarter-master's stores.</p>	<p>1 for veterinary surgery. 1 for quarter-master's stores.</p>	<p>1 for veterinary surgery. 1 for quarter-master's stores.</p>	<p>1 per regiment for bandmaster. 3 per regiment for field and staff officers' servants.</p>
	<p>3 for field and staff officers' servants.</p>	<p>3 for tradesmen's shops.</p>	<p>3 for tradesmen's shops.</p>	<p>2 per company for tradesman's shop.</p>	<p>1 per company for officers' servants.</p>

Standing Camps.

* For articles to complete see preceding page.

VII.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Standing Camps.

ALL SERVICES—cont'd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards and Infantry, and Supply and Store Companies, Army Service Corps.
Tents, complete* circular, single, linen	1 per troop for officers' servants, 2 for tradesmen's shops, or 3 if necessary.	6 per battery for harness.	6 per troop for harness.	3 per company for harness.	2 per regiment for tradesmen's shops, or 3 if necessary.
	2 for messman's stores and mess servants.	—	—	—	2 for messman's stores and mess servants per regiment.
marquee for officers, †	1 per regiment	1 to 2 batteries or less.	1 to 2 troops or less.	1 per 2 companies or less.	24 officers.
	1 per regiment	1 to 2 batteries or less.	1 to 2 troops or less.	1 per 2 companies or less.	1 per regiment.
Tubs, wood, camp, small	1 per field officer	1 to 2 batteries	1 to 2 troops	1 per field officer	1 per field officer.
	1 per staff sergeant's tent, 2 per non-commissioned officers and men's tent.	1 per field officer	1 per field officer	1 per staff sergeant's tent, and 2 per non-commissioned officers and men's tent.	1 per staff sergeant's tent, and 2 per non-commissioned officers and men's tent.
Hammers and Wedges, iron, splitting, wood, 10 inch. ‡	4 hammers and 8 wedges per regiment.	2 hammers and 4 wedges per battery.	4 hammers and 4 wedges per troop.	2 hammers and 4 wedges per company.	1 hammer and 2 wedges per battery, R.A., and each company R.E. and A.S.C. and 4 hammers and 8 wedges per regiment.

* For articles to complete see page 128.

† Or 2 circular tents, see page 128.

‡ Supplied only where wood is issued at such a size that it requires splitting.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

ALL SERVICES—contd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, and Infantry, and Supply and Store Companies, Army Service Corps.
TOOLS ENTRENCHING.					
Axes , pick, 5 or 6½ lbs., helved	2 per troop, and 2 spare per regiment.	Equipment	Equipment	Equipment	2 per battery or company.
Barrows { hand wheel, entrenching	1 per troop	2 per battery	2 per troop	2 per company	2 per company or battery.
	1 per troop, and 2 spare per regiment.	3 " "	3 " "	3 per company	4 per regiment.
Shovels , helved	1 per troop, and 2 spare per regiment.	Equipment	Equipment	Equipment	1 per battery or company, and 2 spare per regiment.
Spades , helved	1 per squadron, and 2 spare per regiment.	Do.	Do.	Do.	6 per regiment, 1 per battery or company R.E. and A.S.C.
HORSE APPOINTMENTS.					
Bags , nose	See page 109	See page 109	See page 109	See page 109	See page 109.
Sacks , corn, 5 bushels	-	-	-	-	-

Standing Camps.

VII. CAMP EQUIPMENT AND ENTRENCHING TOOLS.

Standing Camps.

ALL SERVICES—cont'd.

Articles.	Regiments of Cavalry.	Royal Horse Artillery and Field Batteries.	Troops of the Royal Engineer Train.	Army Service Corps Transport Companies.	Batteries of Garrison Artillery, Companies of Royal Engineers, Regiments of Guards, and Infantry, and Supply and Store Companies, Army Service Corps.
MISCELLANEOUS STORES.					
Brooms, bass, birch, or heath	3 per troop	9 for R.H.A., 6 for field battery.	9 per troop	3 per company	2 per battery or 2 per company.
Forge	1 per regiment	Equipment	Equipment	Equipment	Nil.
Water	2	2 per battery	2 per troop	2 per company	2 per regiment when required.
{ blocks, chopping* * Or covers, blanket, unserviceable.	1	1	1	1	1 per regiment of infantry and per battery or company of other services.
choppers	1	1	1	1	1
cleavers	1	1	1	1	1
knives	1	1	1	1	1
machines, weighing, 28 lbs.	1	1	1	1	1
saws, iron back	1	1	1	1	1
steel	1	1	1	1	1
weights (14 lbs. to ¼ oz.), sets	1	1	1	1	1

Cl. 41, A.C. 1873.

Supplied in accordance with paragraph 217:—

Mallets, tent - 5 per cent. upon number of mallets issued.

Pins, wood - Ditto upon number of pins.

Poles, tent, set - Ditto upon number of poles.

Posts, picket, 2½ ft., 2 per 100 horses.

Ropes, picket

Cords, forage, or heel ropes

Pegs, wood, picket-

Shackles, leather

- 1 per 100 horses.
} 5 per cent, and when these articles
} are retained as equipment a simi-
} lar per-centage is to be allowed.

SPARE ARTICLES.

CAMP EQUIPMENT AND ENTRENCHING TOOLS.

VII.

VIII.—TOOLS.

- 1.—Armourers' Field Forge.
- 2.—Armourers' Tools, Cavalry Regiments.
- 3.—Artificers' Tools, All Services.
- 4.—Tools, Opening Packages.
- 5.—Pioneers' Appointments.

1.—Armourers' Field Forge.

Supplied in accordance with paragraph 234.

The tools and materials in the Field or Dodd's Forge are to be kept up and renewed as they become worn out, at the expense of the Armourer Serjeant. For duration assigned to the forge, see paragraph 346. The screw plates and tops when renewable will be supplied exclusively by the War Department.

The Forge when packed will contain the articles required for Martini-Henry or Snider arms, as marked.

Ar-
mourers'
Field
Forge.

Description of Articles.		No.		
Chests, forge	complete with tools	1		
	empty	1		
Forge, Field, materials for	borax	2		
	cloth, emery, fine, quires	1 1/2		
	dust oil stone	1 1/2		
	emery powder	6		
	glue, best town made	1		
	paper glass	fine No. 1	1	
		coarse, No. 2	1	
	resin	fine, No. 1 1/2	1	
			1	
			lbs.	
			ozs.	
			2	
			4	
	wire	iron	hard W. G., No. 13	1
			soft W. G., No. 20	1*
steel		bright	1 1/2	
			1 1/2	
			1 1/2	
		soft W. G., No. 10	1	
Forge, Field, tools for	anvil, 28 lbs.	1		
	bags, earth, to balance bellows	2		
	bellows, 20 lbs., 21" x 11", F.S.	1		
	copper soldering, 1 1/2 lbs.	1		
	countersink rose	1		
	rimer	half round	1	
		square	2	
	bits	butt plate screw	1*	
		cutter countersink for cartridge head	1*	
		small	1†	
		stock bolt	1*	
		stop-nut	1*	
spoon, 1/8"	1			

* Martini arms only.

† Snider arms only.

TOOLS.

VIII.

ARMOURERS' FIELD FORGE—cont^d.Ar-
mourers'
Field
Forge.

Description of Articles.		No.	
files,	rough	half round - - - 10 inch - - -	2
		three square or triangular - - -	9 " - - - 2 6 " - - - 2
	bent	dead three square - - -	4 " - - - 2
		flat	back - - - 6 " - - - 1 safe edge - - - 5 " - - - 2 taper - - - 6 " - - - 1
	safe edge	safe edge - - -	8 " - - - 2
		smooth	half round - - -	8 " - - - 1 6 " - - - 2 4 " - - - 1 3 " - - - 1
	pillar - - -		6 " - - - 2 3 " - - - 1
	plain back - - -	4 " - - - 2	
	three square or triangular		5 " - - - 1 4 " - - - 2 3 " - - - 1
		floats	barrel pattern -/53 - - - - - - - 1 for iron - - - - - - - 1† rod - - - - - - - 1
	gauges	cartridge	dummy for loading and firing positions - - - - - 1*
			head - - - - - 1*
		chamber, with x handle - - - - - 1†	
		extractor inside - - - - - 1*	
	Forge, Field, tools for	gimlets, nail common - - - - - 6	plug, for mouth of chamber - - - - - 1†
			steel cartridge, head - - - - - 1†
	gouges, handled	firmer	1/8 inch - - - - - 1
			1/4 " - - - - - 1
			3/8 " - - - - - 1
			1/2 " - - - - - 1
flat		1/8 " - - - - - 1 1/4 " - - - - - 1	
	guide mandril - - - - - 1		
hammers, handled, riveting	24 ozs. - - - - - 1		
	4 " - - - - - 1		
handles	awl, brad - - - - - 7		
	file	large - - - - - 2 small - - - - - 2	
horses, wood, 5 lbs., with screws - - - - - 2			
knives drawing 10-inch cutting blade - - - - - 1			
pan, with back and tuyer, 38 lbs. - - - - - 1			
parallel - - - - - 1†			
pincers - - - - - pairs 1			
planes	grooving	5/8 inch - - - - - 1†	
		1/2 " - - - - - 1†	
smoothing double iron		1/2 " - - - - - 1 large, 2 taps - - - - - 1† small, 4 " - - - - - 1†	
	plates, screw	for six taps - - - - - 1† each with 6 taps and 2 wrenches, and with .181", 1/4", and 1/8" holes - - - - - 1†	
pliers, bright, flat nose - - - - - pair 1			
plugs, double, for spring covers - - - - - 1†			
pokers, 7 ozs. - - - - - 1			

* Martini arms only.

† Snider arms only.

TOOLS.

VIII.

ARMOURERS' FIELD FORGE—cont^d.

INSTRUCTIONS FOR USE.

To unpack the Forge.

- 1st. Take out the drawer, and take off the door.
- 2nd. Take out the firepan and tuyer, and fix them in the three holes on the side of the bench, pressing them home.
- 3rd. The wood horses are contained inside the block.
- 4th. Fix the vice, the bolts for which, as also for the horses, are in the drawer. Place the spindle and rockstaff through the two holes filled with cork on the top of the bench.
- 5th. The false bottom contains the heavy tools.

To repack the Forge.

Take down the vice and put it away, then the block, next the anvil and last the firepan. Put in the drawer and side door.

2.—Armourers' Tools, Cavalry Regiments.

Supplied under paragraph 235.

Description of Articles.		No.
Bits , for brace, iron, Armourers' rimer	half round	1*
	4 square	1*
Brace , iron, Armourers'		1*
Chisel , hand, cold, 9 in. x $\frac{7}{8}$ in.		1*
Cutter , flat, for anvil, Armourers'		1
Files , {	bastard { flat, taper, 12 in.	1
	{ half round, 10 "	2
	{ round, 10 "	1
	rough, 3 square, 12 in.	1
	smooth, half round, 10 in.	2
Hammers , handled {	chipping, 2 lbs.	1
	riveting, 4 ozs.	1
Mandril , 11 in.		1
Punches , {	diamond point, 8 in.	1
	large, 11 "	1
	small, 11 "	1
	square, 12 "	1
Tongs , for Armourers, pairs {	forge, or close { large	1
	{ small	1
	hollow bit { large	1
	{ small	1
	plier - { large	1
{ small	1	

N.B.—Articles identical with any in the field forge will be stamped thus * previous to issue.

Ar-
mourers'
Field
Forge.

Ar-
mourers'
Tools,
Cavalry
Regi-
ments.

VIII.

TOOLS.

3.—Artificers' Tools, Mounted Services.

Tools supplied under paragraph 238.

Artificers',
Mounted
Services.

Description.	Cavalry, per Regiment.	Artillery, R. H. A. and Field per Battery.	Engineer Train, per Troop.			Telegraph.	Army Service Corps, Transport Companies.	Divisional.	Ammunition Reserves.		
			Pontoon.	Field Equipment.					Army Corps, or General.	Total.	
				Each of 4 Companies.	Field Park.						Total.
Collar makers' - - -	—	2	4	1	1	5	4	2	2	3	9
Farriers' - - - - -	8	2	1	—	—	—	2	2	2	4	12
Saddlers'† - - - -	4	—	—	—	—	—	—	—	—	—	—
Saddletree makers' -	1	—	—	—	—	—	—	—	—	—	—
Smiths' with Whitworth's stocks and dies.	—	1	—	—	—	—	—	2†	1	2†	—
Wheelers and saddle-tree makers'.	—	1	1	1	2	6	2	2	1	2	6
Bricklayers' and masons'.	—	—	—	1	2	6	—	—	—	—	—
Carpenters' - - - -	—	—	2	12	3	51	2	—	—	—	—
Coopers', painters', and plumbers'.	—	—	—	—	1	1	—	—	—	—	—
Cutting and entrenching.	—	—	—	A full supply.			—	—	—	—	—
Miners and quarrying	—	—	—	4	1	17	—	—	—	—	—
Painters' - - - - -	—	—	3	—	—	—	2	—	—	—	—
Smiths' - - - - -	—	—	1	4	2	18	2	—	—	—	—
Telegraphers' - - -	—	—	—	—	—	—	16	—	—	—	—
Tinmans' - - - - -	—	—	1	—	—	—	—	—	—	—	—

* The War establishment of batteries is supplied with three sets of collar-makers' tools.

† Supplied on service only.

‡ One set of stocks and dies only.

A pair of panniers for saddle-tree makers' tools, and a single pannier for each set of saddlers' tools will be supplied to regiments of Cavalry.

Tools for
opening
Packages.

4.—Tools for Opening Packages.

Supplied under paragraph 239.

Tools for Opening Packages.	Chisel , ripping - - - Driver , screw, 9-inch - - Hammer , handled, 24 ozs. - Knife , laboratory, small -	- - 1 - - 1 - - 1 - - 1	} One set to each Regiment of Cavalry and Infantry, Brigade of Artillery, and Brigade Depot.
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TOOLS.

VIII.

5.—Pioneers' Appointments.

Supplied in accordance with paragraphs 138, 140, and 241.

Pioneers'
Appoint-
ments.

Description of Tools.	Carried by										Total.	Remarks.	
	Ser-geant.	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.			No. 10.
Axes, { felling - - -	1	—	—	1	—	—	1	—	—	1	1	5	
{ hand - - -	—	—	—	—	—	—	1	—	—	1	1	5	
Bar, pinching, with butt and point cases, and straps.	—	—	1	—	—	—	—	—	—	—	—	1	
Caps, leather, hand axe	—	—	—	—	—	—	1	1	1	—	1	4	
Frogs,	—	—	—	—	—	—	1	1	1	—	1	4	
Hooks, bill, handled, in cases.	—	1	1	1	1	1	—	—	—	—	—	5	
Picks, light - - -	—	1	—	—	1	1	—	1	1	—	—	5	
Pouches, for gun spikes.	—	1	1	1	1	1	1	1	1	—	—	8	
Saw, 20 inch, in leather case.	—	—	—	—	—	—	—	—	—	1	—	1	
Shovels, light - - -	—	1	1	1	1	1	1	1	1	—	—	8	
Spikes, gun - - -	2	2	2	2	2	2	2	2	2	2	2	22	
Straps, connecting, felling axe, picks and shovels, pairs.	—	1	—	1	1	1	1	1	1	—	—	7	
Shoering, smiths', in two cases,* sets.	—	—	—	—	—	—	—	—	—	—	1	1	
Small, in leather case, † sets.	1	—	—	—	—	—	—	—	—	—	—	1	

* In No. 1 case.

In No. 2 case.

1 Hammer, shoeing.

1 Buffer, farriers'.

10 Nails, shoe.

1 Knife, drawing, farriers'.

1 Rasp, farriers', 14-inch.

1 Pair pincers, farriers'.

2 Gun spikes (outside).

† The small tools consist of—

Auger, screw, 1-inch	-	-	-	1
Chisels { hand, cold, 8 × $\frac{3}{4}$ inch	-	-	-	1
{ socket, 1 $\frac{1}{4}$ inch	-	-	-	1
Files, saw, hand, 5 $\frac{1}{2}$ inch	-	-	-	1
Hammer, claw, handled 20 ozs.	-	-	-	1

IX.—MISCELLANEOUS SUPPLIES.

- 1.—Army Signalling Equipment.
- 2.—Targets for Gun Practice.
- 3.—Books and Games.
- 4.—Musical Instruments.
- 5.—Instruments, Fortification Class.
- 6.—Veterinary Stores.
- 7.—Miscellaneous Stores.

**Signal-
ling
Equip-
ment.**

1.—Army Signalling Equipment.

EQUIPMENT SUPPLIED IN ACCORDANCE WITH PARAGRAPHS 244 to 248.

Names of Articles.	Number or Quantity.		Remarks.
	Service.	Additional for Instruction.	
Belts , leather, waist - - - -	—	2	
Books { Manual of Instruction - - - -	—	4	
{ message - - - -	4	—	
{ signal, Army and Navy - - - -	4	—	
Bottles , tin, oil, with screw top, 2 quarts -	1	—	
Bugles , fog, horn - - - -	2	—	
Cans , tin, oil, feeding, pints - - - -	2	—	
Cases , leather, for waistbelts { books - - - -	2	—	
	{ feeding cans - - - -	2	—
Chest , wood - - - -	1	—	
Flags , { 4 feet { dark or blue - - - -	2	—	
	army { square { white, with blue stripe - - - -	2	—
	signalling { 2½ feet { dark or blue - - - -	—	4
{ square { white, with blue stripe - - - -	—	4	
Lamps , signalling, bull's eye - - - -	4	—	
Lock , pad, small, with key - - - -	1	—	
Poles , wood, signalling { 6½ feet - - - -	—	—	
	{ 4½ feet - - - -	—	4
Scissors , lamp - - - - pairs	2	—	
Telescopes , draw, army signalling, with straps	2	—	
Stand , tripod, for telescope, with legs, complete	2	—	
Wheels , cypher, Bolton's - - - -	2	—	
Cotton , waste, lbs. - - - - 1	} For four lamps for 30 hours' work.	} A class using either a greater or less number of lamps than four will draw in this proportion.	
Oil , colza, pints - - - - 6			
Wick , cotton, round, ¾-inch, yards 2			

2.—Targets for Gun Practice.

TARGETS SUPPLIED IN ACCORDANCE WITH PARAGRAPH 249.

Targets.

Targets , for Artillery practice.	4 common or 2 barrel targets.	For each Battery, per annum.
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MISCELLANEOUS SUPPLIES.

IX.

3.—Books and Games for Troops on Board Ship.

Supplied in accordance with paragraph 257.

For a Detachment of from 100 to 150 men -	{	One complete set of Games (list given below) and from 75 to 100 Books.
Above 150 and under 300		Two complete sets of Games and 150 Books.
300 and upwards -	{	Three complete sets of Games and 300 Volumes.

Books and Games.

A complete set of Games comprises the following.

—
 Solitaire board and balls.
 Chess board and men.
 Backgammon board and men.
 Draught board and men.
 Dice cup and cubes.
 Dominoes—double nines.
 Dominoes—double sixes.

Proportion of each Class of Books for 100 men.

A. Works of reference -	-	5
B. Biography -	-	10
C. Military and naval -	-	15
D. Voyages and travels	-	20
E. Entertainment and fiction	-	25
F. Poets and poetry -	-	5
G. General literature -	-	5
H. Natural history -	-	5
I. Sacred and serious subjects -	-	10
		100

IX.

MISCELLANEOUS SUPPLIES.

Musical
Instru-
ments.

4.—Musical Instruments.

SUPPLIED IN ACCORDANCE WITH PARAGRAPH 268.

Articles.	Corps.	Proportions.
Bugles, with strings.	Cavalry - - -	1 per Trumpet Major and 3 per Regiment.
	Royal Artillery - - -	1 per Trumpeter.
	Royal Engineers { Companies -	2 per Company.
	Train - - -	3 per Troop.
	Infantry (not Light) - - -	1 to 2 Drummers.
	Light Infantry and Rifles - - -	1 per Bugler.
	Brigade Depôts, of Light Infantry or Rifles.	4 per Brigade Depôt.
	Other Brigade Depôts - - -	2 do. do.
	Army Service Corps, Supply and Store Companies.	1 per Company.
	Malta Fencibles Artillery - - -	} 1 per Company.
Gun Lascars - - -		
Infantry - - -	4 per Regiment.	
Drums, with sticks. { Azemar	Brigade Depôts (not being Light Infantry or Rifles, or partly composed of Light Infantry).	1 per Brigade Depôt.
	Infantry - - -	1 to 2 Drummers.
	Brigade Depôts of Light Infantry, or partly composed of Light Infantry.	1 per Brigade Depôt (for use in drilling recruits).
	Other Brigade Depôts (except Rifles).	2 per Brigade Depôt.
	side, with hooks and cases.	
Flutes, with cases. { B	Infantry - - -	6 per Regiment.
	Brigade Depôts (not being rifles, Light Infantry, or partly composed of Light Infantry).	2 per Brigade Depôt.
Forks, tuning - { F	Infantry - - -	2 per Regiment.
	Cavalry and Infantry - - -	1 per Regiment.
	Royal Artillery - - -	1 per Brigade Head Quarters.
Piccolos, with case. { E	Royal Engineers - - -	1 per Company.
	Brigade Depôts - - -	1 per Brigade Depôt.
Pipes, pitch - { F	Infantry - - -	1 of each per Regiment.
	As for tuning forks - - -	As for tuning forks.
Trumpets, with strings.	Cavalry - - -	} 1 per Trumpet Major and Trumpeter.
	Royal Artillery and Royal Engineer Train.	
	Army Service Corps, Transport Companies.	1 per Trumpeter.
	Malta Fencibles Artillery - - -	} 1 per Company.
	Gun Lascars - - -	

5.—Instruments, Fortification Class.

ARTICLES supplied in accordance with paragraph 270.

Instru-
ments,
Fortifica-
tion.

Compasses, with shifting legs and pencil in case	-	pairs	12
Pens, ruling, brass handle	-	-	12
Rulers, { flat, ebony, 2' 0' common	-	-	12
{ parallel, common, 12 inch	-	-	12
Scales, mathematical, } 18 inch	-	-	12
{ boxwood, common. } 6 "	-	-	12
Squares, wood, set, 30°	-	-	12

MISCELLANEOUS SUPPLIES.

IX.

6.—Veterinary Stores.

SUPPLIED IN ACCORDANCE WITH PARAGRAPH 271.

SIX MONTHS' SUPPLY.

Veteri-
nary
Stores.

	To each Regiment of Cavalry.	To each Battery of Royal Horse and Field Artillery. To each Troop and Depot Royal Engineer Train. To each Transport Company Army Service Corps.
Blankets, horse, coloured, with pads and surcingles	4	3
Bladders, ox	8	6
Canvas, packing, for poultices	6 yards	4
Corks, of sorts	24	12
Flannel, for bandages	10 yards	8
Linen,	10	8
Paper, quires { for balls	1	1
{ for packing	1	1
Pins, of sorts	1	1
Sponges, water	$\frac{3}{4}$ oz.	2
Tape, pieces of	2	1
Tow { coarse	7 lbs.	4
{ fine	2	2
Twine or thread, packing, small	4 ozs.	4

7.—Miscellaneous Stores.

STORES SUPPLIED IN ACCORDANCE WITH PARAGRAPH 268.

Miscel-
laneous
Stores.

Box, industrial school materials.	1	To each regiment of Infantry and Cavalry, Brigade of Artillery, and Company of Engineers.
Boxes, record	6	To the head-quarters of each brigade, Royal Artillery.
Chests, book, medical officers'.	1	To each regiment of Infantry and Cavalry, and each Brigade of Artillery.
Chests, school materials	2	To each regiment of Infantry and Cavalry, Brigade of Artillery, and Company of Engineers.
Handcuffs* with keys	2 pairs	To each mounted Battery of Royal Artillery and each Troop or Company of Engineers.
	1 pair	To each Battery, Troop, or Company in other services.
Leather Squad Bags†	4 pairs	To each Brigade dépôt (Cl. 4 of 1874).
	1	For every 25 non-commissioned officers and men in regiments of Cavalry, Infantry, and West India Regiments.
Writing Case	1	For the instructor of musketry in each Regiment.

* For the supply of handcuffs to drafts, see paragraph 136

† Squad bags are to be returned to store on embarkation for India.

X.—MARKING EQUIPMENT.

Tables of Stamps and Branding Irons supplied in accordance with Paragraphs 272, 277, and 285.

Mounted Services except Cavalry.

Articles.	Head quarter Staff, R.H.A., and Brigades.	Batteries, R.H.A., and Field.	R. E. Train.		A.S. Corps Transport.				mpante.						
			Pontoon.	Telegraph.	Head-qrtr. Staff.										
					Woolwich.	Aldershot.	In Ireland.								
					Dublin.	Curragh.									
Irons, { figures, 0 to 8 - - sets	1	1	2	2	2	2	1	1	2						
branding, $\frac{1}{4}$ inch { letters - - - - - "	1	1	2*	2†	2	2	1	1	2						
Stamps, {	copper, inlaid {	iron, $\frac{1}{4}$ inch {	leather or {	wood, {	$\frac{1}{4}$ inch {	letters - - - - - "	-	-	-						
										figures, 0 to 8 - - - - - "	2	2	1	1	2
										letters - - - - - "	1	1	1	1	1
										figures, 0 to 8 - - - - - "	1	1	1	1	1
										letters - - - - - "	1	1	1	1	1
										figures, 0 to 8 - - - - - "	1	1	1	1	1
iron, for {	1	2	2*	2†	1	1	1	2							
steel for {	1	-	-	-	-	-	-	-							
marking {	1	-	-	-	-	-	-	-							
arms {	1	-	-	-	-	-	-	-							
dash lines for wood, $\frac{1}{4}$ inch	1	-	-	-	-	-	-	-							
figures, metal, $\frac{1}{4}$ inch - - -	1	-	-	-	-	-	-	-							
sets, for wood, $\frac{1}{4}$ inch - - -	1	-	-	-	-	-	-	-							
letters, for wood, $\frac{1}{4}$ inch§	-	-	-	-	-	-	-	-							

N.B.—Letters to be demanded as required according to corps.—R.H.A., R.A., A.S.C. for Royal Engineers, as above, and in addition the Battery and Brigade, or the Troop Letter.

* R.E. d. h. m. s. † R.E. d. h. m. p. s. ‡ R.E. d. m. § As required.

For Cavalry.

Articles.	No.									
Irons, branding $\frac{5}{8}$ " { figures - - - sets	8	Regiments of Dragoon Guards have 7 letters D and G, Dragoons 7 letters D, Hussars 7 letters H, and Lancers 8 letters L in addition.								
letters (A to H) - - - - - "	8									
Stamps {	copper, inlaid, $\frac{1}{4}$ " {		figures - - - set	8						
				letters (A to H) - - - - - "	8					
				iron, {	leather or {	wood, {	$\frac{3}{8}$ " {	figures - - - set	8	
									letters (A to H) - - - - - "	8
									figures - - - - - set	8
									letters (A to H) - - - - - "	8
steel for {	dash lines for wood, $\frac{1}{2}$ in.		1							
marking {	figures, { metal		2							
arms. {	sets, for { wood	1								
letters for wood	- $\frac{5}{8}$ " "	1								

The Year of Issue will be marked previous to issue, thus, W[↑]D and part-worn articles, when re-issued, will be marked with the year of re-issue and with the letter W, thus, W⁸⁹

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APPENDIX I.

Surveys on the Equipment of Regiments and Corps proceeding to or returning from India, referred to in Paragraph 84 of these Regulations.

1. If the survey is at home, the Commissary General, Royal Arsenal, Woolwich, will ascertain from the Senior Ordnance Store Officer, in whose district the Regiment or Corps is stationed, the day on which it will be convenient to the General Officer Commanding that the survey should be made; and will on such day being named, arrange with the Officer appointed on behalf of the Government of India to commence the duty. Arrangements to be made with General Officers Commanding.
2. An Officer will be appointed to hold the survey on the part of the War Office in conjunction with the Officer named by the India Office. Representative Officers.
3. The object of the survey being to obtain a true account of all articles of Government property in possession of the Regiment, with a view to a correct valuation between the Imperial and Indian revenues, it is necessarily minute and somewhat tedious, and much, therefore depends upon the co-operation of all concerned, in order to bring the survey to a speedy and satisfactory conclusion. Object of survey.
4. In order to facilitate the survey, the Officer Commanding the Regiment or Corps the equipment of which is to be inspected, will cause lists of all the articles in possession to be prepared in duplicate, so as to be in readiness to be handed over to the Officers holding the survey, and also the Inspection Forms for each Troop, Battery, or Company. These lists will be made out on War Office forms. Officers Commanding Corps to have all articles laid out.
5. The Regimental equipment ledger will be temporarily balanced to the date of the survey, and will be handed to the Surveying Officers, in order that they may see that all the equipment chargeable to the Regiment is included in the Survey Report. Any transactions which may take place subsequent to the survey will be duly entered in the ledger and a final balance struck to date of embarkation. Ledger to be temporarily balanced.
6. Previous to the commencement of the survey, the Commanding Officer will hand over the prepared forms referred to in paragraph 4 to the Surveying Officers, who will enter the detailed results of their inspection thereon. Commanding Officer to prepare forms.
7. The Surveying Officers will examine the equipments by Troops, Batteries, or Companies. Each man will lay his complete set of accoutrements on a table as he comes up for inspection, every article being separated. Cavalry and Artillery swords and scabbards will be inspected with the accoutrements. Equipments to be examined by Troops and Companies.
8. The inspection of accoutrements being completed the Troop, Battery, or Company will fall in in open order for inspection of arms in the usual way; the inspection of cloaks, capes, and great coats will be taken either with the accoutrements or arms, as may be found most convenient. Inspection of great coats and cloaks.
9. The arms and accoutrements of Staff-Serjeants, Drummers, Band, and Pioneers, will be inspected separately; different rolls being provided for the detail of their appointments. Arms and accoutrements of Staff and Band.
10. After this the Quartermaster's and Schoolmaster's Stores, Armourer's, Saddletree-maker's, and Saddler's tools, and any other miscellaneous articles of Government property will be inspected, their condition and date of issue being carefully noted on rolls previously prepared for the purpose. Inspection of Quartermaster's stores.

APPENDIX I.

APPENDIX TO PARAGRAPH 84.

SURVEYS ON INDIAN EQUIPMENT—cont^d.

Final inspection.

11. The inspection of Troops, Batteries, or Companies being completed, the whole Regiment or Corps will be finally paraded, the spare articles, and those belonging to casuals, being placed on the flank of each Troop, Battery, or Company. The object is to ascertain that the Regiment or Corps collectively is in possession of every article of equipment brought to its charge according to the balance shown in the equipment ledger. It is, therefore, absolutely necessary that every article be produced at this inspection, as any deficiencies afterwards discovered on the examination of the accounts will be chargeable to the Regiment or Corps.

Report of survey to be forwarded.

12. On the termination of the survey, while the Officer representing the India Office is upon the spot, the Surveying Officers will draw up a joint report of the result of the survey, and will forward the same, accompanied by the detailed forms alluded to in paragraphs 4 and 6, through the Commissary General of Ordnance, to the Commissary General, Royal Arsenal.

Surveys on Troops proceeding to India from abroad.

13. The conditions laid down in the previous paragraphs will apply equally to the surveys to be held on equipment of troops proceeding to India from stations abroad, except that no Officer will act on behalf of the Indian Government.

Constitution of Board of survey.

14. A special Board of Survey is to be convened for the inspection, which Board is, as far as practicable, to be constituted as follows:—

A Field Officer of the Regiment, President.

A Captain of the Regiment } Members.
An Ordnance Store Officer }

The Quartermaster of the Regiment will be in attendance for the purpose of affording any information the Board may require.

Arrangement with G.O.C.

15. The Commissary General at the station will arrange as laid down in paragraph 1 for the survey, and also for the convening of the Board.

Necessary forms to be supplied.

16. The necessary forms for carrying out the survey will be supplied as laid down in paragraph 4, and the inspection of the equipment is to be made in accordance with the mode of procedure laid down for Regiments proceeding from the United Kingdom, and when completed the returns will be signed by the President and Members of the Board.

Additional returns signed by Officer Commanding.

17. In addition to the forms supplied from the Ordnance Store Department to the Regiment, the Quartermaster will furnish the following returns, signed by himself, and countersigned by the Officer commanding the Regiment, viz. :—

List of Materials for repairing { Accoutrements.
Arms.

List of Armourer's Tools and Field Forge.

„ Tools for trades, if any are taken out.

„ School stores to be taken out.

„ Dates of Receipt of Equipment.

Returns to be forwarded on completion of survey.

18. When all the Returns and Forms of Inspection have been duly completed and signed, they will be forwarded, with the Board's report of result of inspection or survey, to the Senior Ordnance Store Office at the station for transmission to the Commissary General, Royal Arsenal, Woolwich.

Survey to take place a month before embarkation.

19. In the case of Regiments proceeding from home the survey will be held about one month prior to the date on which the Regiment or Corps is under orders to embark.

APPENDIX TO PARAGRAPHS 84 AND 88.

APPENDIX I. AND II.

SURVEYS ON INDIAN EQUIPMENT—cont^d.

20. Any appointments which the Officers holding the survey and the Officer Commanding the Regiment or Corps may consider necessary to be replaced, owing to their condition at time of survey, will be exchanged by the Commissary General of Ordnance on requisition from the Officer Commanding, countersigned by the Surveying Officers.

Articles considered unsuitable to be exchanged.

21. Commanding Officers will take care that their equipment ledgers are duly balanced up to date of embarkation, and are forwarded, as laid down (*see* paragraphs 88 and 90).

Equipment ledger to be balanced and forwarded.

22. A return of the clothing in possession of the Regiment on embarkation, distinguishing the ranks, grades, badges, cloaks, capes, great coats, cholera belts, clothing chests, sashes, colours, colour-belts, cases, &c., with the dates of issue, will be forwarded from Alexandria, or Malta to the Director of Clothing, Royal Army Clothing Depôt, Pimlico, London.

Return for Director of Clothing.

23. When articles of equipment are taken to India by Drafts, the Officer Commanding the Corps to which the men belong will send to the Commissary General, Royal Arsenal, Woolwich, a return showing the number of articles so taken and the time they have been in possession, and will name the vessel in which the men have embarked, and will also give the date of embarkation.

Report of articles sent with Drafts to be made.

24. When Regiments or Corps return from India, the survey upon the arms, accoutrements, and appointments, and clothing, in possession of a Regiment or Corps, will be held within ten days after its arrival at its final destination in the United Kingdom, and will be conducted in the same way as in the case of Regiments proceeding to India from this country.

Survey to be held within ten days after disembarkation.

25. The Officer Commanding will hand over to the Surveying Officers a copy of the Regimental Board's proceedings on the necessaries brought from India, showing the condition and the number issued on the voyage; also a statement of clothing brought home, distinguishing the ranks and grades, badges, cloaks, capes, great coats and sashes, colours, colour-belts and cases, with dates of issue.

Documents to be produced by Officer Commanding.

APPENDIX II.

Instructions as to the mode of accounting for Stores connected with Equipment, referred to in Paragraph 88 of these Regulations.

1. The Equipment Ledger, page 163, will contain a faithful record of all articles received, issued, or expended by the Corps (clothing and necessaries excepted), and will be balanced up to the 31st December in each year, except in the case of the District Accounts of Royal Artillery (*see* Appendix III). In this ledger will be entered on one side all items received or purchased, including articles to replace others damaged or lost, and on the other those expended, returned into store, or otherwise leaving their charge. All articles purchased will be supported by the tradesman's invoice, and all transactions supported by proper vouchers. Articles made or converted from others will be brought on charge by voucher (W. O. Form 702).

Ledgers to be a faithful record.

The expense and conversion registers will be surrendered for the inspection of the Surveyor-General of the Ordnance when required.

2. Commanding Officers will cause the numbers of each particular article, as it stands on charge in the Regimental Books, to be entered

Balance to be entered at top of folio.

APPENDIX II.

APPENDIX TO PARAGRAPH 88.

INSTRUCTIONS AS TO EQUIPMENT STORES—cont^d.

- on the top line of the left-hand page of each folio (see pages 164, 166, 168, 170).
- Delivery vouchers to be numbered consecutively.** 3. He will cause all the delivery vouchers for stores received, see page 172, to be arranged consecutively, numbered from one upwards, and directly the stores have been received entered on the left hand, or debit side of the ledger (see pages 164, 166, 168, 170).
- Issue vouchers.** 4. Issue vouchers, page 173, will be dealt with in the same way as delivery vouchers, except that they will, directly the stores have been returned, be entered on the right hand, or credit side of the ledger (see pages 165, 167, 169, 171).
- Expense vouchers.** 5. At the end of each quarter expense vouchers, page 174, made up from the work books which are to be kept by the regimental artificers will be prepared as soon as practicable, showing all articles expended in the cleaning, repairing, or preservation of arms, accoutrements, and all other articles of equipment, and these documents after being signed by the Commanding Officer will be numbered as issue vouchers, and posted in the ledger (see pages 174, 175).
- Officer Commanding responsible.** 6. Arms, ammunition, and any other articles issued to drafts or detachments alluded to in paragraphs 136 and 259 will not be accounted for regimentally. The Officer in command of the drafts or detachment will give a receipt in duplicate for the stores, and will be responsible for their proper care and custody until he delivers them into store on the troops reaching their destination, and he will take care to get a receipt, to the same effect as the one he originally gave, from the Commissary into whose charge he gives them.
- Demand and daily work books for regimental artificers.** 7. When Stores or Materials of any kind are required from the regimental store by a Regimental Artificer, he will insert the same in the Demand Book. The specimen Form printed in the Appendix, page 176, shows the mode in which the demands are to be made out and sanctioned. The Officer Commanding will assign to an Officer of the Corps the duty of authorising or refusing the issue of supplies. The Daily Work Book, page 177, will show what service has been completed or is in hand, the quantity of material expended, and the work done by each artificer, and is to be open to the inspection of the Commissary General if required.
- Stock to be taken quarterly.** 8. Stock of the material on hand will be taken at the end of each quarter, under such orders as the Commanding Officer may deem necessary, and the result compared with the quantities which should be on charge.
- Articles struck off charge.** 9. All articles allowed to be struck off charge by proper authority will be entered in expense vouchers, pages 174, 175, which will be numbered as issue vouchers, and be posted on the right-hand side of the ledger. In the case of all vouchers of expenditure of ammunition, whether practice or exercising ammunition, the Commanding Officer will add a certificate to the effect that the quantities struck off charge have been expended in accordance with the regulations herein laid down. When articles taken away by deserters are struck off charge, the name of the deserter, as well as his regimental number, will be given on the expense voucher. The order sanctioning the shooting of a glandered horse will be quoted as the authority for striking off charge portions of harness or saddlery destroyed in order to prevent infection. When arms, accoutrements, and other stores lost in action, by fire, or other causes over which the soldier has no control, are struck off charge, the pro-

APPENDIX TO PARAGRAPH 87.

APPENDIX II. AND III.

INSTRUCTIONS AS TO EQUIPMENT STORES—cont^d.

ceedings of a Court of Inquiry which investigated the matter will be quoted on the expense voucher, as ordered in paragraph 81.

10. On the 31st December in each year the ledger will be added up on each side, the totals on the credit side of the ledger will be placed under the totals of the debit side, and the remain struck (see Appendix, pages 163 to 171). This remain will be entered in the ledger for the following year at the top line of the left-hand page of each folio as the new debit.

Ledgers to be added up.

APPENDIX III.

Instructions for keeping and rendering Royal Artillery District Accounts, referred to in Paragraph 87 of these Regulations.

1. One account only will be kept for the equipments of armaments in each District Office, the total charge for which the Officer Commanding the District is responsible, being posted in detail as the "State" on the 1st April. The account may be divided into two or more volumes, if more convenient for reference and posting. Materials for repair, articles for cleaning and lubricating purposes, paint, and drill stores, will be accounted for separately from Equipment Stores.

District Artillery ledgers.

2. To enable Commanding Officers of Districts to maintain a proper account between themselves and the Officers or Non-Commissioned Officers who are responsible to them for the safe custody of the armament and stores at the several works of defence, subsidiary ledgers will be kept by each sub-accountant, as heretofore. On the 31st March such ledgers will be balanced, and forwarded to the District Office for examination. Subsequently they will be returned, and succeeding transactions duly posted.

Subsidiary ledgers to be kept.

3. The Annual Return, War Office Form 1238, will be rendered by sub-accountants, to Commanding Officers of Districts, as heretofore.

Annual return of sub-accountants.

4. The Annual Return, War Office Form 14, will be compiled and rendered immediately after the 31st March in each year, at which time Commanding Officers will have received the subsidiary ledgers from Officers and Non-Commissioned Officers having the custody of the stores. The "Total" given in the compiled return will be a verification of the District Store Ledger, and should agree with the "Remain," on the 31st March, as shown therein.

District Annual Return to War Office.

5. From Foreign Stations the return on War Office Form 14 will show the following charge only :—

District Annual Return from abroad.

- Ordnance.
- Carriages and Platforms.
- Cartridges, empty and filled.
- Shell and Shot.
- Powder.
- Fuzes and Tubes.

The general and small stores will be omitted.

6. Transcripts of the ledgers will not be required from the home districts, or from such other districts or stations as may hereafter be determined upon, but in lieu thereof the original ledger will be forwarded (for examination) to the Surveyor-General of the Ordnance, by whom it will be returned as soon as possible after its receipt in the War Office. From these stations the Annual Return referred to in paragraph 4 must contain a list of all stores in charge. The original return will be

At home the original ledgers are to be forwarded.

APPENDIX III. AND IV. APPENDIX TO PARAGRAPHS 87 AND 121.

ROYAL ARTILLERY DISTRICT ACCOUNTS—cont^d.

forwarded with the ledger, and will be retained at the War Office as a statement of balances for the examination of the next annual account.

Care to be taken with regard to vouchers for stores expended.

7. Special attention is directed to the various regulations which require that an account, in detail, of the expenditure of stores and material be kept; such account will show all stores or materials for Expense and Conversion, and the Expense and Conversion vouchers will be compiled therefrom. Full information will be given upon expense vouchers, as to the purposes or services for which the stores were expended. The Conversion vouchers on W. O. Form 1,213 will show all materials used in manufacture or conversion of stores, the articles so made or converted being duly brought on charge by voucher, in the ledger. The Expense and Conversion registers will be surrendered for the inspection of the Surveyor-General whenever required.

Copies of vouchers not to be made.

8. The practice of making several copies of vouchers will be discontinued as much as possible. In lieu thereof a Receipt and Issue Journal will be kept in the District Office. When stores are supplied, the delivery voucher relating to them will be forwarded to the Officer or Non-Commissioned Officer who receives them into his custody, by whom an acknowledgment will be given thereon, and the voucher returned to the District Office to accompany the Annual Equipment Ledger.

Sub-accountants.

9. Commanding Officers of Districts will make such arrangements for the division of their store charge as local circumstances render advisable, but it is essential that the number of sub-accountants be limited as much as possible.

APPENDIX IV.
Nomenclature of Artillery Magazines and Stores, referred to in Paragraph 122 of these Regulations.

"Magazine."—Building or buildings with passages leading thereto, in which powder, in bulk, filled cartridges, or shells, are stored.

"Main Magazine."—The principal magazine in a work or battery in which there is more than one magazine.

"Shifting Room" or "Shifting Lobby."—The chamber or portion of the entrance passage to be devoted to putting on or taking off magazine or laboratory clothing.

"Magazine Entrance."—The entrance provided with a shifting room through which those going to the magazines must pass. Where there is more than one they must be distinguished by their positions thus,—*"North Magazine Entrance;" "West Magazine Entrance."*

"Ammunition Entrance."—The entrance to the magazine for ammunition only.

"Magazine Store."—A chamber within a magazine (if provided) in which the hides, wadmiltits, and spare magazine clothing may be kept.

"Cartridge Store."—A chamber in which filled cartridges are stored.

"Shell Store."—A chamber in which filled shells are stored.

NOMENCLATURE OF ARTILLERY MAGAZINES AND STORES—cont^d.

“*Expense Cartridge Store.*”—A cartridge store appropriated for the service of particular guns, and from which the service of a gun or guns is conducted.

“*Expense Shell Store.*”—A shell store appropriated for the service of particular guns, and from which the service of a gun or guns is conducted.

“*Powder Passage.*”—A passage along which powder (in cartridges or in bulk) is transported.

“*Shell Passage.*”—A passage along which shells are transported.

“*Ammunition Passage.*”—A passage along which both natures of ammunition are transported.

“*Lighting Passage.*”—A passage by which access is gained to the lamp recesses.

“*Cartridge Serving Room.*”—A chamber on the same level as the gun into which the cartridge lifts lead, and from which the service of cartridges is conducted.

“*Shell Serving Room.*”—A chamber on the same level as the gun into which the shell lifts lead, and from which the service of shells is conducted.

“*Cartridge Recess.*”—A small receptacle for the storage of a few cartridges for the immediate service of a gun.

“*Shell Recess.*”—A small receptacle for the storage of a few shells for the immediate service of a gun.

“*Cartridge Issuer.*”—A hatch in a door, or opening in a wall, through which cartridges are passed.

“*Shell Issuer.*”—A hatch or opening in a wall through which shells are passed.

“*Cartridge Lift.*”—The lift up which cartridges are hoisted.

“*Shell Lift.*”—The lift up which shells are hoisted.

“*General Lift.*”—A larger description of lift, through which powder in bulk may be passed.

“*Artillery General Store.*”—A store for the reception of the spare stores of all natures.

“*Artillery Store for Small Stores.*”—A store in a battery for the reception of the sights, elevating arcs, and other small stores belonging to the guns and required for their immediate service.

“*Store for Side-Arms and Tackle.*”—A store for the reception of the larger stores necessary for the service of the guns.

“*Laboratory.*”—A building or buildings with passages leading thereto in which ammunition is examined, cartridges made up, and shells filled.

APPENDIX IV. AND V. APPENDIX TO PARAGRAPH 121 AND 122.

NOMENCLATURE OF ARTILLERY MAGAZINES AND STORES—cont^d.

“Cartridge or Shell-Filling Room.”—A chamber in the laboratory in which cartridges are made up and shells filled.

“Receiving Hatch.”—An opening in the door or wall of a cartridge or shell filling room, through which empty shell or powder in bulk is passed.

“Lamp Store.”—A chamber or place in a fort or battery allotted for the storage of lamps and for the use of the lampman.

“Store for Field Forge, Fitting Tools, &c.”—A chamber allotted to the storage of articles required for effecting trifling repairs to the armament.

APPENDIX V.
Instructions in regard to Magazines, Ammunition Stores, Laboratories, and the use of Lamps. Referred to in Paragraph 122.
I.
Magazines and Ammunition Stores in charge of Royal Artillery.

1. No one will pass the barrier at the entrance of a magazine or ammunition store except in the presence of the officer, master gunner, or non-commissioned officer in local charge of the building, who will be responsible that all persons entering comply with the necessary precautions, and that they have no articles of a combustible nature in their possession.

2. All persons employed in magazines, cartridge stores, and in shell stores when connected with cartridge stores, will, before entering the same, change their own clothes and boots for magazine clothing and slippers. This will be effected in the place appointed for shifting, where the boots and clothing taken off will be deposited.

3. Smoking is strictly prohibited near any magazine or ammunition store, and any soldier entering them with a pipe or lucifer match in his possession will be made a prisoner.

4. In all cases where magazines are fitted with the approved pattern of candle lamps, the hand magazine lantern will be used within the magazine or ammunition stores for the purposes of inspection exclusively, and then only by the person in actual charge.

5. Laboratory operations (which include packing and shifting of cannon cartridges) will not be carried on in any magazine, cartridge— or shell—store, nor in any of the passages connected therewith, but only in the building, or tent, specially provided for the purpose (*vide Regulations for Laboratories*).

6. Every favourable opportunity will be taken for airing the magazines on the principles given in the memorandum attached. Thermometers will be issued to all magazines containing 100 barrels and upwards of loose powder.

7. Magazines will never be left open unguarded; persons in charge of them will be attentive to the earliest appearance of a storm, however distant, and upon hearing thunder, or seeing a flash of lightning, they

INSTRUCTIONS IN REGARD TO MAGAZINES, &c.—cont^d.

will give the necessary notice, in order that the doors and ventilators may be immediately closed.

8. The floors of magazines and ammunition stores will be kept scrupulously clean and free from loose grains of powder. The passages will be covered with hides, wadmiltits, or hair cloths, when powder is being moved; these coverings will be frequently lifted and dusted.

9. Barrels, cylinders, and cases will be placed so that the air may circulate about them. They should not be in contact with the masonry of the building.

10. No tubes, fuzes, quick or slow match, lights, rockets, primers, or other combustible stores will be kept in any magazine or cartridge store, or admitted within the enclosure of a magazine where gunpowder is stored. Tubes, fuzes, and all the articles above-named will be kept in the shell stores.

11. Small-arm ammunition, which contains its own means of ignition, will not be stored in the same compartment with gunpowder, whether the latter is loose or in filled cartridges.

12. Oiled rags, cotton waste, oakum, or cloths for cleaning, will not be kept in magazines, ammunition stores, or their passages.

13. All boxes, cases, and barrels placed in magazines or ammunition stores will be properly labelled, and no empty boxes, cases, or barrels will be allowed to remain there.

14. Officers, master gunners, and non-commissioned officers in charge, will exercise great watchfulness, and will be very prompt in reporting any defects or repairs necessary either to the interior or exterior of the buildings in their charge.

15. An inventory board, showing the contents of the magazine or ammunition store, will be hung up in the lobby or passage.

16. The keys of the magazines and ammunition stores will be labelled, and when not in use deposited in a secure place.

17. A copy of these instructions attached to a board will be hung up on the inside of outer doors and on the wall of the entrance to the magazines. Copies for this purpose, printed on foolscap paper, can be obtained on demand.

Memoranda respecting the Ventilation of Magazines.

1. The dampness complained of in buildings will frequently be found to arise from condensation of the watery vapour of the air which enters the building. Buildings with thick walls and vaulted roofs, and especially those covered with earth, are particularly liable to dampness from this cause.

2. Air always contains some proportion of watery vapour. When the proportion is small the air is said to be dry, and when large the air is said to be damp; when the proportion is the greatest that can be diffused through air at a given temperature, the air is said to be saturated at that temperature.

3. The proportion of watery vapour which saturated air contains varies with the temperature, being greater for high than for low temperatures. Air containing a particular proportion of moisture is rendered less capable of depositing moisture by its temperature being raised, and the reverse when it is lowered.

INSTRUCTIONS IN REGARD TO MAGAZINES, &c.—cont^d.

4. Air may be brought to a state of saturation by reducing its temperature. If the air contain but little moisture, the reduction of temperature must be considerable; but if it contain much a slight reduction will bring it to a state of saturation.

5. If air be cooled below the degree of temperature at which it will be in a state of saturation, a portion of the watery vapour contained therein will be deposited on any cold substance with which it may come in contact. The degree of temperature at which air will thus begin to deposit moisture is called its *dew-point*.

6. When warm air enters a comparatively cold building the temperature of the air is reduced by coming in contact with the interior walls and other cold surfaces; and if its temperature be thus reduced below the *dew-point*, condensation will take place. In the latter case it is obvious that the admission of fresh air will not tend to dry a building, but to render it damp.

7. If a magazine 40 feet by 24 feet by 12 feet, the temperature of whose internal walls, &c., is 45 degrees, were to be filled with saturated air having a temperature of 50 degrees, and the magazine were then closed, nearly a pint of moisture would be deposited during the cooling of the fresh air to the temperature of the walls. The pint of moisture would result from the quantity of air sufficient merely to fill the magazine; but if the ventilators were open, the air might be renewed many times in the course of a day, and very much more than a pint of moisture be deposited.

8. Air entering a building whose temperature is higher than its own, becomes capable of absorbing moisture from damp surfaces.

9. The efficiency of the ventilation of a magazine will depend upon the degree of dryness which the fresh air admitted into it possesses, and the rapidity of the current of dry air passing through the building.

10. The dryness of air is indicated by the number of degrees by which its temperature exceeds its *dew-point*.

11. The ventilators of magazines should, in all cases, be constructed so as to exclude or admit the external air at discretion, *and the instructions for their use should be framed with a view to the exclusion of the external air, when the temperature of its dew-point is above that of the interior of the building, and the admission of the air when its dew-point is below the temperature of the interior of the building.*

12. For the foregoing reasons, the common practice by which magazines are open for purpose of ventilation on "every *fine day*," is considerably modified.

13. The interior of a bombproof magazine with thick walls and a vaulted roof, is commonly colder than the outside air in summer and warmer in winter. Winter is therefore the more favourable season for ventilation; but in the climate of England the exceptions to this rule are numerous, owing to the prevalence during winter of warm damp winds from the south and west, and during summer of cold dry winds from the north and east.

14. Whenever, notwithstanding a careful attention to ventilation, magazines are found to be damp, their condition may be improved by the use of quick-lime, which has the property of absorbing from the air about one-third of its own weight of water. This lime is to be obtained on demand from the Ordnance Store Department as required.

INSTRUCTIONS IN REGARD TO MAGAZINES, &c.—cont^d.

15. The proper time for using lime is when the condition of the magazine would not be improved by ventilation, and when, consequently, the ventilators are closed. Lime would be of very little service while a rapid current of air was passing through the building.

16. Lime will be used during the seasons of the year least favourable for ventilation in all magazines that show signs of dampness.

17. The lime should be fresh from the kiln, broken into lumps not larger than about the size of a pigeon's egg, and exposed to the air of the interior of the magazine in shallow vessels.

2.

Making up Cartridges, Filling Shells, and examining Ammunition in Laboratories in Artillery Charge.

1. In most works laboratories have been erected, consisting of a lobby with barrier at the entrance, and filling rooms for shells or cartridges with hatches or openings for the admission and delivery of powder or filled cartridges and shells. Where no laboratory building exists a tent will be used.

2. Laboratory operations will be carried on under the superintendence of an officer, who must satisfy himself that the several men, as detailed in the following paragraph, understand the duties entrusted to them. The presence of an officer will not, however, be necessary at small detached forts or batteries in charge of master gunners where ammunition is made up for the Auxiliary Artillery.

3. The party for laboratory operations will be detailed as follows :

Two men as magazine-men, to issue the powder in barrels from the magazine, and receive and stow cases or cylinders containing made-up cartridges.

Four men for conveying the powder barrels and cases with cartridges or filled shell to and from the laboratory. Two men will be sufficient if only one barrel of powder, or less, be required.

Eight men for the cartridge or shell-filling room, or less, if a small quantity of ammunition is to be made up. These men will be detailed to unhead the barrels, weigh out charges, make up cartridges or fill shells, as may be required.

Two men will be required at the entrance or receiving hatch, to pass in empty shells.

4. The men engaged in the laboratory will exchange their clothing and boots for laboratory clothing and slippers, in the place provided at the entrance, and will on no account re-pass the barrier, without again changing their clothing.

5. Previous to being told-off, the men must be warned to lay aside any knives, pipes, matches, or combustibles they may have about them. Any infringement of this rule will be dealt with as *disobedience of orders*.

6. The operations of filling shells and making-up cartridges will never be carried on at the same time in the same room or tent.

7. The greatest attention will be paid to cleanliness in all parts of the laboratory and ways leading thereto; also in the wagons and barrows used for the conveyance of the powder or ammunition to or from the laboratory. Any loose grains of powder, dust, or grit, will at once be swept up.

INSTRUCTIONS IN REGARD TO MAGAZINES, &c.—cont^d.

8. No barrow, tool, or tackle used outside, will be admitted within the barrier at the entrance of the laboratory.

9. Nothing will be kept inside the barrier of the laboratory but the authorized articles for a laboratory, a proportion of clothing, also a supply of zinc cylinders for cartridges, which must be thoroughly examined previous to admission.

10. The shells to be filled will be piled on old spherical projectiles or stone, outside the entrance to the laboratory on hatch lettered "For admission of shell," if there be one. The shells will be thoroughly cleaned and brushed externally before being passed into the laboratory—planks being laid down when the heavier shells are filled, in order to save the floor.

11. All shells, previous to filling, will be carefully searched internally, and all loose filings or pieces of lacquer removed.

12. All shells, up to the 9-inch inclusive, can be *up-ended* by hand on the blocks, for examination and filling. Heavier shells require the tackle and strap.

13. Made-up cartridges or filled shells will on no account be issued by the same door or hatch through which the loose powder or empty shells are passed in.

14. Powder barrels will be conveyed to the laboratory, and zinc cylinders containing filled cartridges to the magazine or cartridge store, in barrows, in order to keep them free from dirt or grit.

15. The floor of the chamber in the laboratory, appropriated as a filling-room, will be covered with hides when in use.

16. Empty powder barrels will be passed out at once, and stored in a clean place; and in the event of a barrel not being emptied, it will be re-headed and returned to the magazine.

17. Not more than the equivalent to two barrels of powder will be in the laboratory, or in transit between the magazine and laboratory, at the same time.

18. A copy of these instructions attached to a board will be hung up in the entrance to the laboratory. Copies for this purpose, printed on foolscap, can be obtained on demand.

3.

The employment of Lamps for Lighting Magazines, Ammunition Stores, Laboratories, and their Passages.

1. On no account will any but the authorized lamps be used for the purpose of lighting magazines, ammunition stores, laboratories, and their passages.

2. Such lamps only will be lighted from time to time as the Officer commanding the Artillery may direct.

3. A magazine copper lantern will be used for the inspection of the ammunition stores and underground passages.

4. One or more men, as may be required, will be specially detailed as "lampmen" for each work to attend to all the lighting arrangements and stores connected therewith.

5. As all candle lamps required for lighting the ammunition stores can be placed in position from the "light" passages, the lampmen will on no account pass beyond the junction of the "light" passages with the general passages.

APPENDIX VII.

Instructions for Browning Wrought-iron R.M.L. 16 and 9 pr. Guns of 8 and 6 cwt., in accordance with Paragraph 320.

1. The ingredients for browning field guns should be used in the following manner:—

- (a.) Steam the gun for 10 hours, then wash with a lye of potash (1 lb. black potash to 1 gallon of water); repeat until the grease is thoroughly eradicated.
- (b.) If there be no convenience on service for the performance of the steaming process, simple washing may have to be employed instead. The whole object is to get rid of oil which may remain on the surface of the iron, and hence the water should be as hot as can be borne by the operator, who will rub vigorously all over the exterior surface with a clean hard brush; a little hard soap should be used, and the water should be frequently changed so as to ensure its perfect cleanness. This washing and scrubbing with soap and hot water must be repeated at least three times; then wash the gun with a lye of potash as aforesaid.
- (c.) Repeat the process *b*, consisting of three washings and scrubbing with soap and water, and of one washing with the lye of potash several times; to obtain perfect cleanness may require many repetitions of the whole process, and care must be taken not to touch the gun with any fatty matter, or even with the hand, as it may take hours of washing to wholly remove the effect.
- (d.) Wash with hydrochloric acid and water (equal parts) to remove oxide, then wash with clean water and wipe dry.
- (e.) Apply browning mixture with a sponge, and let stand for 12 hours in a temperature not less than 60° or more than 100°; then rub off rust with scratch-card and brush.
- (f.) Apply mixture, let stand six hours, rub off rust.
- (g.) Repeat *f*.
- (h.) Apply mixture, let stand six hours, then boil five minutes in a lye of potash (1 lb. potash to 2 gallons of water), then rub off rust.
- (i.) When cold repeat *f*.
- (j.) Repeat *f*.
- (k.) Apply mixture, stand six hours, then boil as in *h* operation, rub off rust, then coat with olive oil.

2. Care will be taken to well sponge and dry the bore and chambers of the gun after each operation of washing, steaming, or boiling.

APPENDIX TO PARAGRAPHS 323, 337. APPENDIX VIII AND IX.

APPENDIX VIII.
Instructions for cleaning Martini-Henry Rifles, referred to in Paragraph 323 of these Regulations.

1. Place a small piece of well-oiled flannel, about 3 inches by 2 $\frac{1}{4}$ inches size, over the barrel, with the muzzle of the rifle to be cleaned in the centre of the flannel. Pass the latter into the bore gently with the jag on the cleaning rod, care being used in working it backwards and forwards.
2. Should the jag become hard to move, and likely to jam, it should be forced through the barrel, and the flannel taken off at the breech end.

APPENDIX IX.
Instructions for the Management and Preservation of Brass Side Drums, referred to in Paragraph 337.

1. When the drums are taken to pieces (which is to be done once a week), the screws and nuts are to be properly cleaned, and any sand or grit which may have accumulated is to be entirely removed. In dusty weather, this is to be done at least twice a week.
2. The nuts inside the drums, which secure the "snare studs" are to be examined, and if found to be loose, or the outer shoulder of the stud not close to the shell, the nut is at once to be screwed tight, to prevent any undue strain upon the stud which passes through the shell. This precaution applies only to drums of the first or earliest patterns, and not to the present improved pattern drum which has the snare stud differently secured.
3. In tightening the cords, great care is to be taken that the outer edges of the hoops are exactly parallel, and no screw is to have more than three turns given to it at a time, which is to be gradually lessened as the drum is brought to its proper pitch.
4. The screws, which pass through the pulley brackets, and which act as an axle to the pulley, are to be examined before the cords are tightened, to see that the point of the screw is even with the brass plate inside, and if it is found to have started, it is to be at once screwed home. If the thread in the brass plate inside the hoop is stripped, the screw is to be taken out, the plate slightly countersunk, and the end of the screw clenched or rivetted to the plate. The pulleys are also to have their bearings occasionally oiled, that they may work quite freely.
5. When it is found that the cords have stretched until the screws project beyond the top of the nut, the cord is to be shortened, as the screws are not only exposed to injury, but are liable to come in contact with the sticks.
6. Strict attention is to be paid to the steel screws, to see that they are not bent by the drum falling, or from other causes, as the nut will

INSTRUCTIONS FOR MANAGEMENT OF DRUMS—cont^d.

not then work freely, and there will be some difficulty in bringing the cords up to their proper tension.

7. Should it be found that the heads of the drum, after being in use some time, have stretched so much as to cause the ends of the pulley brackets to come in contact with the heads and the edge of shell, the heads are to be immediately taken off and relapped.

8. In lapping new heads the following directions are to be carefully attended to :—

- a. Steep the head in cold water for a quarter of an hour,—not longer on any account ; then fold it up with the thicker parts in the centre, and so leave it for about half-an-hour. By this time it should be fit for lapping, but in some heads, when the vellum is unusually stout, it is advisable, in folding the head, to roll it in a wet towel, which will in due time render the stoutest head sufficiently pliable, whereas if left too long in water the vellum would become rotten or pulpy and waste away.
- b. The head should be wiped over to remove superfluous moisture and then lapped to the flesh hoop, in doing which much care should be observed to ensure a proper and even lapping.
- c. The head when so lapped should then be fitted to the drum and left for 48 hours or more, according to the weather, in order that the vellum and hoop may get thoroughly dry before the drum is braced up for use as directed in paragraph 3.
- d. On no account should artificial means be used to hasten the drying of the head, such as placing it in a very warm room, by the fire, or in the sun ; a cool dry air is the best.

9. When drums are taken to pieces for cleaning, lapping or re-lapping, the Drum-Major is always to superintend the operation (or in his unavoidable absence, the senior drummer who has most experience), and see that these instructions are fully carried out.

APPENDIX X.

EQUIPMENT LEDGER.

Referred to in the Instructions, Appendix II.

W.O. Book 239.

REGIMENT, 120TH FOOT.

ACCOUNT of EQUIPMENT in charge of the Officer commanding the*
120th Regiment of Infantry, showing the quantities received, ex-
pended, and otherwise disposed of, between the 1st day of January
1870, and the 31st day of December 1870.

* Here insert Regiment or Battalion.

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	PAGE
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Materials for repairing arms	-
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ACCOUTREMENTS	-
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Appointments, pioneer's	-
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IMPLEMENTS, signalling	-
INSTRUMENTS—	
Marking, and stamps	-
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Carpenter's	-
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PACKAGES	-
MISCELLANEOUS articles	-

Folio 1.

Appendix X.—continued.

Cr.

ISSUES.

No. of Voucher.	Date.	To whom issued or how expended.	ARMS.												AMMUNITION, SMALL-ARM.									
			Rifles, B. L.						Swords, or claymores.			Scabbards, for swords.			Cartridges, B. L.		Packages for							
			With cleaning rods.	Long.	Short.	Long rifle.	Sword.	Long rifle.	Scabbards, leather, for.	Bayonets.	Parts of.	Caps, snap, with chains.	Staff Serjeants.	Drummers, buglers, pipers, and band.	Pioneers.	Swords, or claymores.	Staff Serjeants.	Drummers, buglers, pipers, and band.	Pioneers.	Ball.	Blank.	Boxes.	Half.	Quarter.
1	Feb. 10, 1870	To Tower	3	2	6	20	2	1	1	2	1	1	1	30	..	..	..	..	..	..	..	..	..	..
	Dec. 31, 1870	Total issues	3	2	6	20	2	1	1	2	1	1	1	30	..	..	..	..	..	..	..	..	..	..

Folio 2. Appendix X.—continued.

RECEIPTS.

Dr.

No. of Voucher.	Date.	From whom received.	MATERIALS FOR REPAIRING ARMS.																							
			Parts of.																	Barrels, parts of.		Bayonets.				
			Common to pattern II.** and III.										Special to.													
			Covers, spring.		Nipples.		Pins, breech-block.		Pistons.		Screws, pin, breech-block.		Pin, breech-block.	Piston.	Pattern II.**			Pattern III.				Screws, tang.	Complete, with lockings	Rings, locking.	Parts of.	
External.	Internal.											Pins, locking.	Screws, pin, locking.	Springs, pin, locking.	Bolts, breech-block.	Pins, thumb-piece, roller, axis.	Rollers, thumb-piece.	Screws, breech-block, thumb-piece.	Springs, breech-block, bolt.	Thumb-pieces.						
3	Jan. 1, 1870	Remain Dec. 31, 1869.	...	...	1	...	5	2	1	3	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
	Feb. 10, 1870	Tower - -	...	1	1	1	5	3	4	2	1	1	1	1	1	...	...	...	...	...	...	2	1	1	1	1
	Dec. 31, 1870	Total receipts -	1	1	2	10	5	5	5	5	1	1	1	1	1	...	...	...	...	...	...	2	1	1	1	1
	" "	Deduct issues from the other side.	...	1	2	3	...	...	2	1	1	1	1	1	1	...	...	...	...	...	...	1	1	1	1	1
	" "	Remain at date -	...	...	...	7	5	3	4	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...

ISSUES.

Cr.

No. of Voucher.	Date.	To whom issued, or how expended.	MATERIALS FOR REPAIRING ARMS.																Total issues									
			Actions, B.L., Snider.																									
			Parts of																									
			Special to																									
			Complete, pattern.	External.	Internal.	Nipples.	Pins, breech-block.	Pistons.	Screws, pin, breech-block.	Pin, breech-block.	Springs.	Common to Patterns II.* and III.				Pattern II.**				Pattern III.				Barrels, parts of.	Complete with locking rings.	Rings, locking.	Screws, ring, locking.	Bayonets.
				External.	Internal.	Nipples.	Pins, breech-block.	Pistons.	Screws, pin, breech-block.	Pin, breech-block.	Springs.	Pistons.	Screws, pin, breech-block.	Pin, breech-block.	Springs.	Bolts, breech-block.	Pins, thumb-piece, roller, axis.	Bolters, thumb-piece.	Screws, breech-block, thumb-piece.	Springs, breech-block bolt.	Thumb-pieces.	Screws, tang.	Complete with locking rings.	Rings, locking.	Screws, ring, locking.	Bayonets.		
6	March 31, 1870	Expended in repairs	...	1	...	1	...	3	...	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
8	June 30	"	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Sept. 30	"	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Dec. 31	"	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dec. 31	"	...	1	1	2	1	3	...	2	1	1	1	1	1	...	...	...	...	...	1	...	...	1	1	1

APPENDIX X.

Folio 7. Appendix X.—continued.

RECEIPTS.

Dr.

No. of Voucher.	Date.	From whom received.	ACQUISITIONS.																
			Bills.		Staff Sergeants.		Drummers, buglers, and band.		Pipers.		Waist, without lockets.		Waist, with snake hooks.		Other ranks.		Billets with buckles, waist belts.	Valise Equipment, Staff Sergeants.	Bottles, zinc, oil.	Braces, Valise Equipment, sets.
Bills.		Staff Sergeants.		Drummers, buglers, and band.		Pipers.		Waist, without lockets.		Waist, with snake hooks.		Other ranks.		Billets with buckles, waist belts.	Valise Equipment, Staff Sergeants.	Bottles, zinc, oil.					Braces, Valise Equipment, sets.
1	January 1, 1870	Remain Dec. 31, 1869
	Feb. 4	Tower	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dec. 31	Total receipts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	"	Deduct issues from the other side.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	"	Remain at date	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX XI.

APPENDIX XI.

Referred to in the Instructions, Appendix II.

W.O. Form 444.

Voucher No. 1.

ARMS.

ALL REGULAR SERVICES.

Ordnance Office,

Tower, 4th February, 1876.

Delivered out of Her Majesty's Stores at this place, by Commissary in charge to Officer Commanding 120th Regiment at Aldershot, the under-mentioned articles, pursuant to the orders dated 31st January 1876.

Ledger folio.	ARTICLES.	Total number or quantity.*	S.	R.	U.
1	Breech-loading, interchangeable parts of	complete, with carbines, { Artillery - - - -			
1		cleaning rods { rifled Cavalry - - - -			
1		rifles { long, pat. 53 - - - -	..	3	
		{ short, pat. 60 - - - -			
		complete with locking rings, rifle, pat. 53	..	2	
		scabbards, leather for - - - -	..	6	
		bayonets { complete - { carbines, Artillery - - - -			
		of { sword { rifle, short - - - -			
		scabbards { leather, rifle, short - - - -			
		for { steel, carbine - - - -			
1	caps, snap, complete, with chains, B.L. arms covers, sight, carbine, Cavalry - - - -	..	20		
	sights, fore, carbine, Cavalry protectors for - - - -				
	Lances, complete, { pattern 1860 - - - -				
	without flags { flags with elastic band for - - - -				
	{ pattern 1868 - - - -				
	{ flags for - - - -				
	Pistols, rifled, { complete { 10 inch - - - -				
	M.L., Cavalry, { 8 " - - - -				
	with swivel { parts of, { barrels, nipples for, spare - - - -				
	rammer { rods, cleaning - - - -				
	{ stoppers, muzzle - - - -				
	Scabbards, { Cavalry - - - -				
	sword, iron { staff-serjeants { Royal Artillery - - - -				
	{ " Engineers - - - -				
1	Scabbards, sword, leather	brass mounted { drummers & band, Line Regts. - - - -	..	2	
		pioneers - - - -	..	1	
		gilt mounted, staff-serjeants, and schoolmasters - - - -	..	1	
		iron { Highland { drummers, pipers, and - - - -			
	mounted { regiments { band - - - -				
	{ rifles - { staff-serjeants - - - -				
	{ buglers and band - - - -				
1	Swords	brass { drummers and band, Line Regiments - - - -	..	1	
		hilt { pioneers, saw-back - - - -			
		gilt hilt, { Line Regiments - - - -	..	2	
		staff-serjeants { Royal Engineers - - - -			
	Cavalry - - - -				
	iron { Highland { drummers, piper, and band - - - -				
	hilt { regiments { staff-serjeants - - - -				
	{ rifle { buglers and band - - - -				
	{ regiments { staff-serjeants - - - -				
	{ Royal Artillery, staff-serjeants - - - -				
1	Wrenches, nipple, T-headed, with cramps { breech-loading - - - -	..	30		
	{ muzzle-loading - - - -				

* This column only to be filled in when Arms are returned to the Tower, the other columns being left blank.

JNO. AMOS,
Commissary.

APPENDIX XII.

Voucher No. 1.

Referred to in the Instructions, Appendix II.

W.O. Form 445.

ARMS.

ALL REGULAR SERVICES.

Ordnance Office,

Tower, 10th February 1876.

Received into Her Majesty's Stores at this place, under the charge of Commissary of Stores, the under-mentioned articles, pursuant to the orders dated 31st January 1876.

Ledger folio.	ARTICLES.	S.	R.	U.	
	<i>From 120th Regiment.</i>				
1	Breech-loading interchangeable parts of	complete, with carbines, { Artillery - - - -			
		cleaning rods { rifles - { long, pat. 53 - - - -		3	
		{ rifles - { short, pat. 60 - - - -			
		complete with locking rings, rifle, pat. 53		2	
		scabbards, leather for		6	
		bayonets { complete { carbines, Artillery - - - -			
		sword { rifle, short - - - -			
		scabbards { leather, rifle, short - - - -			
		for { steel, carbine - - - -			
		caps, snap, complete, with chains, B.L. arms		20	
covers, sight, carbine, Cavalry - - - -					
sights, fore, carbine, Cavalry protectors for - - - -					
	<hr/>				
	Lances, complete, { pattern 1860 - - - -				
	without flags { flags with elastic band for - - - -				
	{ pattern 1868 - - - -				
	{ flags for - - - -				
	Pistols, rifled, { complete { 10 inch - - - -				
	M.L., Cavalry, { 8 " - - - -				
	with swivel rammer { parts of - { barrels, nipples for, spare - - - -				
	{ rods, cleaning-stoppers, muzzle - - - -				
	Scabbards, sword, iron { Cavalry - - - -				
	{ staff-serjeants { Royal Artillery - - - -				
	{ Engineers - - - -				
	brass { drummers and band, Line Regiments - - - -	2			
	mounted { pioneers - - - -	1			
1	Scabbards, gilt mounted, staff-serjeants, and schoolmasters - - - -	1			
	leather { iron { Highland { drummers, pipers, and band - - - -				
	mounted { regiments { staff-serjeants - - - -				
	{ rifles { buglers and band - - - -				
	{ staff-serjeants - - - -				
	brass { drummers and band, Line Regiments - - - -	1			
	hilt { pioneers, saw-back - - - -				
	gilt hilt, { Line Regiments - - - -	2			
	staff-serjeants { Royal Engineers - - - -				
	Cavalry - - - -				
	iron { Highland { drummers, pipers, and band - - - -				
	hilt { regiments { staff-serjeants - - - -				
	Rifle { buglers and band - - - -				
	regiments { staff-serjeants - - - -				
	Royal Artillery; staff-serjeants - - - -				
	Wrenches, nipple, { breech-loading - - - -				
	T-headed, with cramps, { muzzle-loading - - - -	30			

JNO. AMOS,
Commissary.

APPENDIX XIII.

APPENDIX XIII.

Referred to in the Instructions, Appendix II.

W.O. Form 449.

EXPENSE VOUCHER.

Voucher No. 6.

I certify that the articles enumerated below have been
 *Here state
 Regiment, public, belonging to the* 120th Regiment of Infantry under
 Battery, Corps, my command, during the quarter ending 31st March 1876,
 &c. and are hereby struck off charge.

Date, 31st March 1876.
 Station, Aldershot.

Ledger folio.	ARTICLES.		Numbers.	Remarks.				
	BREECH-LOADING, INTERCHANGEABLE ARMS.							
2	Actions	complete, B. L., Snider, pattern - - - - -	-	1				
		parts of	common to patterns II.** and III.	covers, spring { external - - - - -	-	1		
				internal - - - - -	-	1		
			nipples - - - - -	-	3			
			pins, breech-block - - - - -	-	1			
			pistons - - - - -	-	1			
			screws, pin, breech-block - - - - -	-	1			
			springs	pin, breech-block - - - - -	-	1		
				piston - - - - -	-	1		
			special to	pattern II.**	pins, locking - - - - -	-	1	
					screws, pin, locking - - - - -	-	1	
		pattern III.		springs, pin, locking - - - - -	-	1		
bolts, breech-block - - - - -	-			1				
2	Barrels, parts of	screws, tang - - - - -	-	1				
		complete, with locking rings, rifle, long - - - - -	-	1				
2	Bayonets	parts { rings, locking - - - - -	-	1				
		of { screws, ring, locking - - - - -	-	1				
		scabbards, parts of	complete - - - - -	-	1			
			complete { carbine - - - - -	-	-			
		sword	rifle, short - - - - -	-	-			
			bolts - - - - -	-	-			
		scabbards, for	parts of { screws, spring - - - - -	-	-			
			springs - - - - -	-	-			
		Caps, snap	complete - - - - -	complete { leather, rifle, short - - - - -	-	-		
				steel, carbine - - - - -	-	-		
		screws for, sets of 2 - - - - -	-	-				
		parts of { leathers - - - - -	-	-				

(Signed) A. M. WILSON, Lieut.-Col.,
 Commanding 120th Regiment.

APPENDIX XIII.—cont^d.

W.O. Form 485.

EXPENSE VOUCHER.

Voucher No. 14.

As applicable to desertion.

I certify that the articles enumerated below have been
 * Here fill in struck off charge under the authority dated* *having been*
 authority, if any. *lost by the desertion of the men named in this voucher.*

Date, 26th October 1870.

Ledger folio.	ARTICLES.	No.	Rate.	A			B	C
				Amount credited to Public.				
				£	s.	d.		
7	{ Belts, waist, without lockets, rank and file }	3						
	{ Frogs, rank and file -	3						
	{ Locketts, union, rank and file - - - }	3						

*Names of Deserters and Date of Desertion.**Regl. No.*

249 *John Smith, deserted 25th September 1870.*
 690 *William Taylor, deserted 25th September 1870.*
 365 *Arthur Thompson, deserted 25th September 1870.*

(Signed) *A. M. Wilson, Lieut.-Colonel,
 Commanding 120th Regiment.*

If ammuation is expended see Appendix II., paragraph 9.

APPENDIX XIV.

WAR OFFICE BOOKS.

APPENDIX XIV.
 Referred to in the Instructions, Appendix II.
 DEMAND BOOK FOR STORES REQUIRED BY THE ARTIFICERS OF C. BATTERY, 27TH BRIGADE,
 ROYAL ARTILLERY. W.O.R. 248.

Required by the Artificers, the under-mentioned articles, showing for what purpose :—

By what Tradesmen.	Date.	Description of Articles.	Number or Quantity.	For what purpose required.	Initials of Officer authorising the Supply.
Collarmaker - -	Dec. 1, 1870	Hide, brown, backs of, collar lb. Rings, iron, 1 $\frac{3}{4}$ -in. - - - Buckles, iron, roller barred, 1 $\frac{1}{4}$ -in. Squares, head collar, iron - - Thread, collar - - - oz. Wax, black - - - lb.	2 4 4 3 4 4	Repairing head collars - - 20	
Farrier - -	Dec. 3, 1870	Iron, wrought, flat, $\frac{3}{4}$ -inch x $\frac{1}{4}$ -inch - - - lb. Wire, iron, hard, No. 7, W.G. ozs.	3 6	Repairing gullet plates of universal saddles - - - 8	
Saddletree maker -	Dec. 3, 1870	Arches, universal, N.P., hind Bars, side, universal - - - Screws, iron { $\frac{3}{4}$ -inch - - - { 1 " - - - Tongue - - - Wedge - - -	2 1 2 2 1 1	Repairing hind fork of saddletree 1	

APPENDIX XIV.—contd.

Referred to in the Instructions, Appendix II.
DAILY WORK-BOOK OF THE C. BATTERY, 27th BRIGADE, ROYAL ARTILLERY.
 W.O.B. 244.
 Work-book of the collarmaker of C. Battery, 27th Brigade, Royal Artillery.

Date.	Articles repaired.	Number.	By whom authorised.	Description of Material expended, to be described according to the Ledger Headings.	Quantity.	Articles manufactured (as a special case) and brought on charge by Certificate.	
						Voucher.	Folio.
Dec. 1, 1870	Collars, head	20	-	Hide, brown, backs of, collar lb. Rings, iron, $1\frac{1}{2}$ -inch - - Buckles, iron roller, barred, $1\frac{1}{2}$ -inch - Squares, head collar, iron - - Thread, collar - - - oz. Wax, black - - - lb.	2 4 4 1 4 ‡		

APPENDIX XV.

List of Articles to be packed when Regiments proceed on Foreign Service.

Referred to in Paragraphs 236 and 323.

TOOLS and MATERIALS from Armourers' Forge, liable to Damage by Sea Water to be packed in Tin-lined Case.

Wire, all.
Sets, all.
Blades, awl.
Blocks, both.
Braces, iron.
Broaches, all.
Chisels, firmer, handled, all.
Countersink, both.
Cramps, for extractor with thumbscrew (gun metal).
Cutters, all.
Cylinders, for cartridge heads (single).
Drifts, wire.
Drivers, screw, handled, all.
Files, all.
Floats, all.
Gauges, all.
Gimlets, of sizes.
Gouges, all.
Guide, mandrill.
Hammers.
Knives, drawing, 10-inch, cutting blade.
Parallel.
Pincers, pairs.
Planes, all.
Plates, all.
Pliers, flat nose (bright), pairs.
Plugs, double, for spring covers.
Punch.
Rasps, both.
Saws, both.
Scrapers, 6 inches long.
Shaves, spoke, 3 inch.
Shovels, stockers.
Stakes.
Taps, all.
Tester, trigger.
Tools, breeching, drilling, flute, all.
Vices, hand, 16 ozs.
Wrenches, all.

Component Parts of Arms.

Actions, all parts of.
Barrels, parts of, screws.
Bayonets, all and parts of.
Furniture, all.
Jags.
Locks, all parts of.
Rods, cleaning, all.

Protectors for Sight.

Sights, all parts of.

Instructions for packing Armourers' Stores, &c.

1. A water-tight case for the purpose of packing all the Armourer Serjeant's tools, and spare parts of arms, included in the above lists will be supplied to each regiment ordered abroad.

2. Two pounds of the following composition for coating the metal work, viz. :—

	Parts.
Oil, Mineral - - -	6
Beeswax - - -	2
Soft Paraffin - - -	2
Chalk - - -	1

will be supplied to every regiment, likewise 4lbs. of Soft Paraffin for dipping the calico in, together with twelve yards of unbleached calico, and thirty yards of twine.

3. The articles above detailed will be demanded on W.O. Form 1457, and will be brought on charge in the regimental ledger.

4. The Armourer Serjeant will cut the calico into sizes to correspond with the dimensions and number of articles to be packed.

5. Previous to being packed the articles must be coated with the composition, and the calico dipped in the paraffin.

6. The local Ordnance Store Officer will supply on loan to each regiment, the means for heating the paraffin, by hot water or steam. Under no circumstances will it be melted directly over a fire.

7. The local Ordnance Store Officer will also issue solder if requested, and will lend soldering irons.

8. After completing the packing, the Armourer Serjeant will carefully solder down the tinned iron flap to the inner case, taking every precaution to ensure that no part remains unsoldered.

9. On the arrival of the regiment at its destination the case will be returned to the nearest Ordnance Store station, where it will be repaired and kept for future and similar employment.

General
Service.

APPENDIX XVI.

TOOLS.

Referred to in Paragraph 237.

LIST OF TOOLS AND IMPLEMENTS FOR A BRICKLAYER
AND MASON.Approved 17th May 1862. $\frac{57}{\text{Gen. No. } 2246}$

PACKED IN A CHEST.

Description of Articles.		No.
Axes , unhandled	{ masons double, 6 lb. - - - - -	2
	{ pick, 6½ lb. - - - - -	1
Bar , setting, masons general, and F.S.	- - - - -	1
Bevel , wood, blade 15 inch -	- - - - -	1
Bob , plumb, with line for rules	- - - - -	1
Brushes , whitewash	{ 9 oz. - - - - -	1
	{ 6 " - - - - -	1
Bucket , leather, or case for masons sieve	- - - - -	1
Chest , tool empty, bricklayers and masons	- - - - -	1
	{ 24 inch - - - - -	1
	{ 18 " - - - - -	1
	{ 12 " - - - - -	1
Chisels	{ masons { boasting { 2½ " - - - - -	1
	{ 2 " - - - - -	1
	{ shifting { 1½ " - - - - -	1
	{ 1 " - - - - -	1
	{ brick - - - - -	1
Hammers , handled	{ double, pick pointed, masons 8 lb. - - - - -	1
	{ mash - - - - -	1
	{ chisel point, 5 lbs. - - - - -	1
	{ spalling, 10 lbs. - - - - -	1
Handles , hammer, masons -	- - - - -	1
Helve , axe, pick, 6½ lbs. -	- - - - -	1
Level , Field Service, 2 ft. 6 in.	- - - - -	1
Line , bricklayers and masons	- - - - -	1
Mallet , masons -	- - - - -	1
Pins , iron, line, bricklayers and masons	- - - - -	1
Plugs and feathers, masons -	- - - - -	6
Points , masons -	- - - - -	2
Rules	{ masons plumb - - - - -	1
	{ 2 feet, 4 fold - - - - -	1
Sieve , iron wire, 5 mesh, 13 inch diameter	- - - - -	1
Shovel , universal pattern, helved	- - - - -	1
Square , iron, figured	- - - - -	1
	{ bricklayers, 12 inch - - - - -	1
	{ masons, 10 inch - - - - -	1
	{ bricklayers and plasterers, setting or round, top	1

LIST OF TOOLS AND IMPLEMENTS FOR A CARPENTER.
FOR GENERAL ARMY AND ENGINEER FIELD SERVICE.

General
Service.

Approved 30th August 1858. $\frac{54}{\text{Artillery}} \frac{2044}{}$

PACKED IN A CHEST.

Description of Articles.		No.	
Adze , unhandled, wheelers	- - - - -	1	
	$1\frac{1}{2}$ inch	1	
	$1\frac{1}{4}$ "	1	
	$1\frac{1}{8}$ "	1	
Augers , shell	1 "	1	
	"	1	
	"	1	
	"	1	
	"	1	
	"	1	
Axes , helved, broad, carpenters	$6\frac{1}{2}$ lb.	1	
Bag , tool, carpenters	- - - - -	1	
Bar , crow, 7 lb.	- - - - -	1	
Bevel , steel blade, 12 inch	- - - - -	1	
Blades , awl, brad	- - - - -	24	
Brush , glue, or paint, sash, tool, No. 6	- - - - -	1	
Chest , tool, empty, carpenters, general army service	- - - - -	1	
Chisels	firmer $1\frac{1}{2}$ inch	1	
	handled 1 "	1	
		$\frac{3}{4}$ "	1
		$\frac{1}{2}$ "	1
	hand cold carpenters, &c.	8 inch \times 1 inch 8 " \times $\frac{3}{4}$ "	1 1
Chisels , handled	mortice $\frac{1}{2}$ inch	1	
		$\frac{1}{4}$ "	1
		$1\frac{1}{2}$ "	1
		1 "	1
	socket $\frac{3}{4}$ "	1	
		$\frac{1}{2}$ "	1
Compasses , pairs	common 7 inch	1	
	wing 10 "	1	
Drivers , screw	14 inch	1	
	6 "	1	
Files	bastard half-round, 14 inch	2	
		round 14 "	1
	saw, 3-square hand	$5\frac{1}{2}$ "	18
		tenon 4 "	6
Gauges	mortice	- - - - -	1
	single	- - - - -	1
	nail, common	- - - - -	8
Gimlets	spike $\frac{3}{4}$ inch	- - - - -	2
		$\frac{1}{2}$ "	2
Gouges , handled	firmer $\frac{3}{4}$ inch	- - - - -	1
		" $\frac{1}{2}$ "	1
		" $\frac{1}{8}$ "	1
	socket or pecking, 1 inch	- - - - -	1

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

General
Service.LIST OF TOOLS AND IMPLEMENTS FOR A CARPENTER—cont^d.

		Description of Articles.	No.
Hammers, handled	{	rivetting, 24 ounce - - - - -	1
		shoeing, wheelers - - - - -	1
Handles	{	sledge, smiths', 10 lb. - - - - -	1
		adze, wheelers - - - - -	1
Files	{	auger - - - - -	4
		awl, brad - - - - -	6
Files	{	large - - - - -	2
		middling - - - - -	2
		small - - - - -	2
Line, chalk, carpenters, with $\frac{1}{4}$ lb. of chalk	- - - - -	1	
Mallet, carpenters	- - - - -	1	
Pencils, carpenters, blacklead	- - - - -	12	
Pins, iron, draw-bore	{	16 inch - - - - -	1
		12 " - - - - -	2
Pincers, carpenters	- - - - -	pair	
Plane	{	bead, $\frac{3}{8}$ inch - - - - -	1
		jack, double iron - - - - -	1
		plough, with 8 irons - - - - -	1
		skew, rebate, $1\frac{1}{2}$ inch - - - - -	1
		smoothing, double iron - - - - -	1
		trying - - - - -	1
Pot, glue, double iron, one quart	- - - - -	1	
Punches, carpenters and wheelers, 7 inch	{	large - - - - -	1
		small - - - - -	1
Rasps, coarse, half-round, 12 inch	- - - - -	1	
Reels, chalk line, wood	- - - - -	1	
Rule, 2 foot, common	- - - - -	1	
Saws,	{	hand, 26 inch - - - - -	1
		tenon, iron back, 19 inch - - - - -	1
		turning or compass - - - - -	1
Set, saw, hand	- - - - -	1	
Shaves, spoke	{	4 inch - - - - -	2
		$3\frac{1}{4}$ " - - - - -	2
Spanner, MacMahon's, 15 inch	- - - - -	1	
Squares	{	iron, figured - - - - -	1
		steel blade, 9 inch - - - - -	1
Stocks, carpenters, with 24 bits	- - - - -	1	
Stones	{	carpenters, oil, in frame - - - - -	1
		scythe rag - - - - -	1

LIST OF PLAIN TOOLS FOR A CARPENTER.
FOR GENERAL FIELD SERVICE.

General
Service.

Approved 30th November 1875. $\frac{7901}{963}$

PACKED IN A SMALL CHEST.

Description of Articles.	No.
Adze , unhandled, carpenters'	1
Auger , screw { 2 in. - - - - -	1
{ 1 " - - - - -	1
{ $\frac{3}{4}$ " - - - - -	1
Basket , tool, carpenters'	1
Chest , tool, with lock and key	1
Chisels { hand, cold, carpenters', &c. 8 in. \times $\frac{3}{4}$ in.	1
{ socket, handled, $\frac{3}{4}$ in.	1
Compasses , wing, 10-in.	pair 1
Drivers , screw, 12 inch	1
Files , saw, 3 square { hand, $5\frac{1}{2}$ inch	3
{ crosscut, 9 inch	2
Gimlets , { nail, common - - - - -	3
{ spike $\frac{5}{16}$ inch - - - - -	2
Hammers , handled { shoeing, wheelers'	1
{ riveting, 24 oz.	2
Handles , { adze, carpenters'	1
{ auger - - - - -	2
{ file, small - - - - -	2
Knife , carpenters' and wheelers', drawing	1
Line , chalk, carpenters', with $\frac{1}{4}$ lb. of chalk	1
Pencils , black lead, carpenters'	6
Pincers , carpenters', pair	1
Punch , carpenters' and wheelers', 7 inch, small	1
Reel , chalk line, wood	1
Rules , 2 feet, fourfold, collarmakers'	2
Saw , hand, 26 inches	1
Sets , saw { hand - - - - -	1
{ pit and crosscut - - - - -	1
Shave , spoke, $3\frac{1}{4}$ inch	1
Spanner , McMahon's, 15 inch	1
Square , steel blade, 9 inch	1
Stone , rag, scythe	1

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

General
Service.LIST OF TOOLS AND IMPLEMENTS FOR A COLLAR
MAKER AND SADDLER.

FOR GENERAL ARMY AND ENGINEER FIELD SERVICE.

Approved 30th August 1858. $\frac{54}{\text{Artillery}}$ and 30th November 1875. $\frac{7901}{963}$
2044

PACKED IN A CHEST.

Description of Articles.		No.	
Blades, awl -	backing - - - - -	6	
	buckling { 4-inch - - - - -	3	
	" { 2 $\frac{1}{2}$ " - - - - -	3	
	drawing - - - - -	2	
	garnishing { 2 $\frac{1}{2}$ inch - - - - -	2	
	" { 1 $\frac{1}{2}$ " - - - - -	2	
	" { 1 " - - - - -	4	
	" { 1 " - - - - -	4	
	harness - - - - -	4	
	" { 1 " - - - - -	4	
panel or	" { 1 $\frac{1}{2}$ " - - - - -	2	
	" { 5 $\frac{1}{2}$ " - - - - -	2	
seat	" { 4 " - - - - -	2	
Bone, hollow - - - - -	- - - - -	1	
Chest, tool, empty, collar makers and saddlers - - - - -	- - - - -	1	
Chisel, hand, cold, } 8 inches \times $\frac{3}{4}$ inch - - - - -	- - - - -	1	
carpenters, &c. - - - - -	- - - - -		
Claws, collar makers or saddlers - - - - -	- - - - -	1	
Claw, nail - - - - -	- - - - -	1	
Compasses, common, 7-inch - - - - -	- - - - -	1	
Creases { screw - - - - -	- - - - -	1	
	single - - - - -	1	
Driver, screw, 6 inch - - - - -	- - - - -	1	
Gimlet, nail, common - - - - -	- - - - -	1	
Hammers, handled { riveting { 24 oz. - - - - -	- - - - -	1	
	" { 8 oz. - - - - -	1	
	" saddle seat - - - - -	1	
	" saddlers or collar makers - - - - -	1	
Handles, awl { drawing - - - - -	- - - - -	4	
	" harness - - - - -	4	
	" seat - - - - -	4	
Irons - { collar makers { collar { 34-inch - - - - -	- - - - -	1	
	" { collar { 29 " - - - - -	1	
	" { pricking { 23 " - - - - -	1	
	" seat stuffing, 14-inch - - - - -	1	
	" head - - - - -	1	
Knives { collar makers { half round - - - - -	- - - - -	1	
	" head - - - - -	1	
	clasp, with marline spike - - - - -	1	
saddler's gauge-plough - - - - -	- - - - -	2	
Lead, punching, collar makers, 8 lb. piece - - - - -	- - - - -	1	
Mallets { box-wood, tinman's - - - - -	- - - - -	1	
	" collar - - - - -	1	
	" collar, of sizes - - - - -	12	
Needles { collar, half-moon { 4 $\frac{1}{2}$ inch - - - - -	- - - - -	2	
	" { 5 $\frac{1}{2}$ " - - - - -	2	
	" { 6 $\frac{1}{2}$ " - - - - -	2	
	harness, of sizes - - - - -	- - - - -	100
	quilting or drawing, 4-inch - - - - -	- - - - -	6
sewing, saddlers, of sizes - - - - -	- - - - -	100	
stitching " " - - - - -	- - - - -	25	

APPENDIX TO PARAGRAPH 237.

APPENDIX XVI.

LIST OF TOOLS AND IMPLEMENTS FOR A COLLAR MAKER AND SADDLER—contd.

General
Service.

Description of Articles.							No.
Palms , collar makers	-	-	-	-	-	-	1
Pincers , saddlers	-	-	-	-	-	pair	1
Pliers , bright, flat nose	-	-	-	-	-	"	1
	No.						
	31	-	-	-	-	-	1
	30	-	-	-	-	-	1
	28	-	-	-	-	-	1
Punches , oval	27	-	-	-	-	-	2
	24	-	-	-	-	-	1
	23	-	-	-	-	-	1
	22	-	-	-	-	-	2
	20	-	-	-	-	-	2
Rasps , shoemakers, 10 inch	-	-	-	-	-	-	1
Rule , 2 feet, four fold	-	-	-	-	-	-	1
Scissors , 9 inch, tailors	-	-	-	-	-	pair	1
Shaves , collar makers	-	-	-	-	-	-	1
Spike , marine, wood	-	-	-	-	-	-	1
Steel , butchers	-	-	-	-	-	-	1
Stone , scythe	{	rag	-	-	-	-	1
	{	rub	-	-	-	-	1
Thimbles , tailors	-	-	-	-	-	-	2
Tools , edge, saddlers, No. 1, 2, and 3	-	-	-	-	-	set	1

THE FOLLOWING MATERIALS TO BE DEMANDED AS REQUIRED, viz.—

Hemp or Flax , fine	-	-	-	-	-	lbs.
Nails , tacks (No. of nail to be given)	-	-	-	-	-	lbs.
Needles (description to be given)	-	-	-	-	-	No.
Thread , packing, small	-	-	-	-	-	lbs.
Wax { bees'	-	-	-	-	-	lbs.
{ black	-	-	-	-	-	lbs.

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

**General
Service.**

LIST OF TOOLS AND IMPLEMENTS FOR A PAINTER.

FOR GENERAL ARMY AND ENGINEER FIELD SERVICE.

Approved 5th March 1855. $\frac{C.}{3612}$

PACKED IN A CHEST.

		Description of Articles.	No.
Brushes	- { paint	{ sash tool { No. 2 - - - - -	2
		{ " 4 - - - - -	2
		{ ground, 000 - - - - -	2
		{ unground, 000 - - - - -	2
	- { sable, writing, with sticks	{ goose { large - - - - -	1
		{ small - - - - -	1
		{ duck, large - - - - -	1
	{ crow, large - - - - -	1	
Chest , tool, empty, painters -	- - - - -	1	
Kettles , camp, light -	- - - - -	2	
Knife - {	palette, 9 inch - - - - -	1	
	stopping, 5 " - - - - -	1	
Pot , tin, writing -	- - - - -	1	

APPENDIX TO PARAGRAPH 237.

APPENDIX XVI.

LIST OF TOOLS AND IMPLEMENTS FOR A COLLAR MAKER AND SADDLER—cont^d.General
Service.

Description of Articles.							No.
Palms , collar makers	-	-	-	-	-	-	1
Pincers , saddlers	-	-	-	-	-	pair	1
Pliers , bright, flat nose	-	-	-	-	-	"	1
	No.						
	31	-	-	-	-	-	1
	30	-	-	-	-	-	1
	28	-	-	-	-	-	1
Punches , oval	27	-	-	-	-	-	2
	24	-	-	-	-	-	1
	23	-	-	-	-	-	1
	22	-	-	-	-	-	2
	20	-	-	-	-	-	2
Rasps , shoemakers, 10 inch	-	-	-	-	-	-	1
Rule , 2 feet, four fold	-	-	-	-	-	-	1
Scissors , 9 inch, tailors	-	-	-	-	-	pair	1
Shaves , collar makers	-	-	-	-	-	-	1
Spike , marline, wood	-	-	-	-	-	-	1
Steel , butchers	-	-	-	-	-	-	1
Stone , scythe	{	rag	-	-	-	-	1
		rub	-	-	-	-	1
Thimbles , tailors	-	-	-	-	-	-	2
Tools , edge, saddlers, No. 1, 2, and 3	-	-	-	-	-	set	1

THE FOLLOWING MATERIALS TO BE DEMANDED AS REQUIRED, viz.—

Hemp or Flax , fine	-	-	-	-	-	lbs.
Nails , tacks (No. of nail to be given)	-	-	-	-	-	lbs.
Needles (description to be given)	-	-	-	-	-	No.
Thread , packing, small	-	-	-	-	-	lbs.
Wax { bees'	-	-	-	-	-	lbs.
black	-	-	-	-	-	lbs.

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

**General
Service.**

LIST OF TOOLS AND IMPLEMENTS FOR A COOPER.
FOR GENERAL ARMY AND ENGINEER FIELD SERVICE.

Approved 4th February 1860, No.

$\frac{54}{\text{Artillery}}$
4637

PACKED IN ONE CHEST.

Description of Articles.		No.
Adzes , handled, coopers	{ notching, chequered head	1
	{ rounding	1
Axe , helved, coopers	-	1
Borer , bung, 3 in.	-	1
Chest , tool, coopers, empty	-	1
Chisels , hand, cold, coopers, 7 in.	-	1
Chives , coopers	{ 6 gallons, 7 $\frac{1}{4}$ in.	1
	{ 4 ,, 6 $\frac{3}{4}$,,	1
Compass , wing, 12 in.	-	pair
Drivers , coopers	{ kneed iron	1
	{ socket iron	1
Files , saw, three square, hand, 5 $\frac{1}{4}$ in.	-	6
Froe , or splitting knife, 12 in.	-	1
Hammers , handled	{ hand, coopers	1
	{ riveting, 8 oz.	1
Handle , coopers, froe	-	1
Howel , coopers, barrel	-	1
Iron , coopers, bick	-	1
Jigger , coopers	-	1
Jointer , coopers, field service	-	1
Knives , coopers	{ cramming	1
	{ drawing	1
	{ notching	1
Pincers , carpenters	-	pair
Punches , coopers	{ large, 10 in.	1
	{ small, 6 ,,	1
Rule , coopers, 18 in.	-	1
Saw ,	{ hand, 26 in.	1
	{ turning or compass	1
	{ two hand round	1
Shaves , coopers	{ inside { cask	1
	{ pail	1
	{ outside cask	1
Stocks , coopers	{ croze { barrel or puncheon	1
	{ pail	1
	{ with bits and jaws, complete	1
Stone	{ carpenter's oil, in frame	1
	{ scythe rag	1
Vice , coopers, screw, iron	-	1

General
Service.

LIST OF TOOLS FOR A SADDLETREE MAKER.

PACKED IN A PAIR OF PANNIERS.

Approved 5th March 1864. 54
Gen. No.
2145

No. 1 PANNIER.

Description of Articles.	No.			
Bevel steel blade, 12 inches	1			
Bits, brace, saddletree makers	{	countersunk { brass or wood	1	
		for { iron	1	
		gouge	$\frac{1}{4}$ inch	1
			$\frac{3}{8}$ "	1
			$\frac{1}{2}$ "	1
			$\frac{3}{4}$ "	1
nose	1			
rimer, square	1			
Blades, awl, brad	6			
Brace, iron, armourers and saddletree makers	1			
Brushes, glue, or sash tool, No. 6	1			
Chest, tool, empty, saddletree makers, 2 panniers	pair 1			
Drivers, screw	{	14 inch	1	
		6 "	1	
Files	{	bastard, half round, 14 inch	1	
		saw, three square	hand, $5\frac{1}{2}$ inch	4
			tenon, 4 "	2
Gimlets, nail, common	6			
Hammers,	{	24 oz.	1	
		rivetting	1	
		handled { saddle seat	1	
Handles	{	awl, brad	2	
		file { large	2	
		small	5	
Mallet, carpenters	1			
Pencils, carpenters, blacklead	6			
Planes	{	jack, double iron	1	
		panel, saddletree makers	1	
		smoothing, double iron	1	
Pot, glue, double copper, one pint	1			
Rasp, coarse, half round, 12 inch	1			
Rule, saddletree makers, iron folding, 2 feet	1			
Saw, frame, hand, 15 inch	1			
Screw, thumb, 9 inch	1			
Shaves,	{	4 inch	1	
		spoke { $3\frac{1}{4}$ "	1	
Stone, carpenters, oil, in frame	1			
Vice, hand, 16 oz.	1			

No. 2 Pannier.

Chisels, handled	{	firmer { $1\frac{1}{2}$ inch	1	
		{	1 "	1
			" "	1
			" "	1
			" "	1
			" "	1
			" "	1
mortice	1			

APPENDIX TO PARAGRAPH 237.

APPENDIX XVI.

LIST OF SMITHS' TOOLS—cont^d.General
Service.

Description of Articles.		No.
Braces	{ iron, smiths' - - - - -	1
	{ ratchet, 9 inch - - - - -	1
Callipers,	iron, unmarked, six inch sea service - - - - - pair	1
Chests,	{ empty, smiths' G.A. service - - - - -	1
tool	{ complete with tools, Whitworth's stocks and dies, 1½ inch to ¼ inch with tray - - - - -	1
	{ cross cut, 7 inch - - - - -	1
Chisels	{ hand, cold { 8 inch × ¾ inch carpenters, &c. - - - - -	1
	{ V or engraving - - - - -	1
	{ smiths' rod { cold - - - - -	1
	{ hot - - - - -	1
Dividers,	spring, 6 inch - - - - -	1
Drills	{ brace ratchet, 9 inch (Nos. 1 to 11) - - - - -	33
	{ smiths or armourers' (set of 5) - - - - - set	1
Drivers,	screw, 14 inch - - - - -	1
Dogs,	iron, for shoeing wheels, with ring tires - - - - -	2
	{ flat taper { 14 inch - - - - -	2
	{ 10 " - - - - -	1
	{ 6 " - - - - -	3
	{ 14 " - - - - -	2
	{ half round { 12 " - - - - -	1
	{ 8 " - - - - -	1
	{ round { 10 " - - - - -	1
	{ 8 " - - - - -	1
Files	{ bastard { half round 8 inch - - - - -	1
	{ safe edge 6 " - - - - -	1
	{ half round 6 " - - - - -	1
	{ second cut { square { 6 inch - - - - -	1
	{ 4 inch - - - - -	1
	{ smooth { fitters' { 24 ozs. - - - - -	1
	{ 8 " - - - - -	1
	{ smiths' { 3 lbs. - - - - -	1
	{ 2 " - - - - -	1
Hammers,	handled { middling - - - - -	4
	{ small - - - - -	3
Holder,	rivet head, with wood handle for trail eyeplate - - - - -	1
Plate	{ breast, smiths', iron - - - - -	1
	{ screw, 10 taps - - - - -	1
Post boring	ratchet brace, small - - - - -	1
	{ steel centre - - - - -	1
Punches	{ round { ½ inch × 10 inch - - - - -	1
	{ ⅜ " × 4 " - - - - -	1
	{ smiths', hot { ⅜ inch - - - - -	1
	{ ½ " - - - - -	1
Rule,	2 feet, common - - - - -	1
Saw,	frame, bow, cutting metal, 10 inch, complete - - - - -	1
Scribers	- - - - -	1
Snap,	hand riveting - - - - -	1
Spanner,	box foresight - - - - -	1
Stocks,	steel, drill, smiths or armourers' - - - - -	2
String,	drill, cat-gut, smiths' - - - - - knot	1
	{ forebit - - - - -	2
Tongs,	smiths' { forge, small - - - - -	1
	{ hollow bit - - - - -	2
	{ plier - - - - -	1
Vices	{ bench, portable, saddle-tree makers' - - - - -	1
	{ hand, 16 ozs. - - - - -	1

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

General Service. LIST OF SPECIAL AND ADDITIONAL TOOLS REQUIRED FOR SMITHS' AND ARMOURERS' USE.

FOR REPAIRING ARMSTRONG'S GUNS AND CARRIAGES IN THE FIELD OR GARRISON.

PACKED IN A CHEST.

Description of Articles.		No.
	Brace , ratchet, 9-inch	1
	Can , lubricating, smiths	1
	Chisels , cross cut { 18-inch	2
	{ 7 "	1
	Drills , brace, ratchet 9" (No. 1 to 11)	11
	{ 7-inch to 40-pr.	1
	Drifts , upsetting { 20-pr.	1
	{ 12, 9, and 6-pr.	1
	Drivers , screw { 5-inch	1
	{ bent	1
	{ feather edge, 6-inch	1
	{ flat taper { 10-inch	6
	{ 8 "	4
	{ half round { 10 "	4
	{ 6 "	1
	{ knife { 9-inch	1
	{ 8 "	1
	{ 6 "	3
	{ parallel, 2 safe sides, 6-inch	1
	{ bastard { 12-inch	2
	{ round { 8 "	2
	{ 6 "	1
	{ 5 "	1
	{ safe edge, { 12 "	1
	{ or hand { 10 "	1
	{ square { 10 "	2
	{ 8 "	1
	{ 5 "	2
	{ warding { cut on one side,	2
	{ 3 1/2-inch	
	{ second cut { safe edge { 8-inch	1
	{ square, safe { 6 "	1
	{ side { 8 "	1
	{ 8 "	1
	{ half round { 6 "	1
	{ 4 "	1
	{ smooth { knife { 6 "	3
	{ safe edge { 12 "	1
	{ 10 "	1
	{ 8 "	1
	{ 4 "	1
	Handles , file { large	3
	{ middling	3
	{ small	3
	Hammer , fitters, handled, 8-oz.	1
	{ brass { 7-inch	1
	{ copper { 6 "	1
	{ 5 1/2 " x 5/8-inch	1

Tools, Ordnance.—
Special for B.L.
Guns, Land Service.

Files

APPENDIX TO PARAGRAPH 237.

APPENDIX XVI.

LIST OF SPECIAL AND ADDITIONAL TOOLS REQUIRED FOR SMITHS AND
ARMOURERS USE—cont^d.**General
Service.**

Description of Articles.		No.	
Tools, Ordnance.— Special for B. L. Guns, Land Service.	Punches, steel {	centre - - - - -	1
		13-inch - - - - -	1
		7 " - - - - -	1
	Spanners - {	6 " - - - - -	1
		4 " - - - - -	1
		double ended for sights - - - - -	1
	Tommies, steel {	McMahon's, 9-inch - - - - -	1
forked - - - - -		1	
	plain - - - - -	1	
Chest, with lock, empty - - - - -		1	
The following materials are also supplied with the foregoing tools, viz. :—			
Cloth, emery flour, sheets - - - - -		6	
Cloths, sponge - - - - -		12	

LIST OF TOOLS AND IMPLEMENTS FOR A TINMAN.

FOR GENERAL ARMY AND ENGINEER FIELD SERVICE.

Approved 5th March 1855. $\frac{c.}{3612}$

PACKED IN A CHEST.

Description of Articles.		No.
Awls, handled, scoring, tinman's - - - - -		1
Bellows, tinman's, double blast - - - - -		1
Chest, tool, empty, tinman's - - - - -		1
Chisels, tinman's {	1 inch - - - - -	1
	$\frac{1}{2}$ " - - - - -	1
Compasses, common, 7 inch - - - - -	pair	1
Files, bastard, flat taper, 12-inch - - - - -		2
Groover, hand, tinman's - - - - -		1
Hammers, {	creasing, 10 oz. - - - - -	1
	handled, hollowing - - - - -	1
	tinman's riveting - - - - -	1
Hook, shave, plumbers, 1$\frac{1}{2}$-inch - - - - -		1
Irons, {	creasing, 11 lbs. - - - - -	1
	tinman's soldering - - - - -	2
Knife, laboratory, small - - - - -		1
Mallet, boxwood, tinman's - - - - -		1
Pot, fire, tinman's - - - - -		1
Rasps, fine, half round, 12-inch - - - - -		1
Shears {	Scotch, or hand - - - - -	1
	stock - - - - -	1
Square iron, figured - - - - -		1

APPENDIX TO PARAGRAPH 237.

APPENDIX XVI.

LIST OF TOOLS AND IMPLEMENTS FOR A WHEELER AND SADDLETREE
MAKER—cont^d.General
Service.

Description of Articles.		No.
Gauges	{ mortice - - - - -	1
	{ single - - - - -	1
Gimlets	{ nail, common - - - - -	8
	{ spike { $\frac{3}{8}$ inch - - - - -	2
	{ " $\frac{1}{4}$ " - - - - -	2
Gauges, handled	{ boxing { 2 inch - - - - -	1
	{ " $1\frac{3}{4}$ " - - - - -	1
	{ " $\frac{5}{8}$ " - - - - -	1
	{ " $\frac{3}{8}$ " - - - - -	1
	{ firmer { " - - - - -	1
	{ " - - - - -	1
	{ socket or pecking, 1 inch - - - - -	1
Hammers, handled	{ riveting { 24 oz. - - - - -	1
	{ " 16 " - - - - -	1
	{ saddle seat - - - - -	1
	{ shoeing, wheelers - - - - -	1
	{ sledge, smiths', 10 lb. - - - - -	1
Handles	{ adze, wheelers - - - - -	1
	{ auger - - - - -	4
	{ awl, brad - - - - -	6
Knife, carpenters' and wheelers', drawing	- - - - -	1
Line, chalk, carpenters', with $\frac{1}{4}$ lb. chalk	- - - - -	1
Mallet, carpenters' -	- - - - -	1
Pencils, carpenters', black lead	- - - - -	12
Pincers, carpenters'	- - - - - pair	1
Pins, iron, drawbore	{ 16 inch - - - - -	1
	{ 12 " - - - - -	2
Planes	{ bead, $\frac{3}{8}$ inch - - - - -	1
	{ jack, double iron - - - - -	1
	{ plough, with 8 irons - - - - -	1
	{ skew, rebate, $1\frac{1}{2}$ inch - - - - -	1
	{ smoothing, double iron - - - - -	1
	{ trying " - - - - -	1
Pot, glue, double, copper, one pint	- - - - -	1
Punches, carpenters' and wheelers', 7 in	{ large - - - - -	1
	{ small - - - - -	1
Rasp, coarse, half-round, 12-inch	- - - - -	1
Reel, chalk line, wood	- - - - -	1
Rule, 2 feet, common	- - - - -	1
Saws	{ dovetail, brass back, 9 inch - - - - -	1
	{ frame, hand, 15 inch - - - - -	1
	{ hand, 26 inch - - - - -	1
	{ tenon, iron back, 19 inch - - - - -	1
	{ turning or compass - - - - -	1
Screw, thumb, 9 inch	- - - - -	1
Set, saw, hand	- - - - -	1
Shaves, spoke	{ 4 inch - - - - -	2
	{ $3\frac{1}{2}$ " - - - - -	2
Spanners, McMahon's, 15 inch	- - - - -	1
Squares	{ iron, figured - - - - -	1
	{ steel blade { 9 inch - - - - -	1
	{ " 4 " - - - - -	1
Stocks, carpenters', with 24 bits	- - - - -	1
Stones	{ carpenters' oil, in frame - - - - -	1
	{ scythe, rag - - - - -	1
Vices	{ bench, portable, saddletree makers - - - - -	1
	{ hand, 16 oz. - - - - -	1
Sampson, wheelers'*	- - - - -	1

* "Sampsons" are only issued when specially demanded.

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

General
Service.WHEELERS' AND SADDLETREE MAKERS' TOOLS.
FOR A BATTERY, WITH WROUGHT-IRON CARRIAGES, IN ONE CHEST.

Description of Articles.		No.
Adze , unhandled, wheelers	- - - - -	1
	7 inch	1
Augers , shell	1 1/2 inch	1
	" "	1
	" "	1
	" "	1
Axe , helved, wheelers' 7 lbs.	- - - - -	1
Bag , tool, carpenters'	- - - - -	1
Bevel , steel blade, 12 inch	- - - - -	1
Blades , awl, brad	- - - - -	12
Brushes , glue (or sash tool, No. 6)	- - - - -	1
Chest , tool, empty, wheelers' and saddletree makers	- - - - -	1
Chisels	firmer, handled { 1 1/2 inch	1
	" " { 1 1/4 "	1
	coach makers' { 1 1/2 "	1
	pattern { 1 1/4 "	1
	" " { 3/4 "	1
	" " { 3/4 "	1
	" " { 3/4 "	1
	" " { 3/4 "	1
hand, cold, carpenters' 8 inch + 3/4 inch	- - - - -	1
mortice, handled, 1/2 inch	- - - - -	1
Compasses , wing, 7 inch	- - - - - pairs	1
Drivers , screw	14 inch	1
	6 "	2
Files	bastard { flat, taper, 14 inch	1
	" { half round, 14 "	1
	saw, three square { hand, 5 1/2 inch	9
	" { tenon, 4 "	9
Gauges	for saddletree, iron	sets
	single	1
Gimlets , nail, common	- - - - -	3
Gouges , handled	firmer { 1 inch	1
	" { 3/4 "	1
	" { 1 1/2 "	1
	socket or pecking, 1 inch	1
Hammers , handled	riveting { 24 ozs.	1
	" { 16 "	1
	saddle seat	1
	shoeing, wheelers'	1
Handles	adze, wheelers'	1
	auger	2
	awl, brad	4
	file, middling	2
Knives , carpenters' and wheelers' drawing	- - - - -	1
Line , chalk, carpenters', with 1/2 lb. of chalk	- - - - -	3
Mallet , carpenters'	- - - - -	1
Pencils , carpenters', blacklead	- - - - -	6
Pincers , carpenters'	- - - - - pairs	1
Planes	jack, double iron	1
	plough, with 8 irons	1
	skew, rebate, 1 1/2 inch	1
	smoothing, double iron	1
Pots , glue, double, copper, 1 pint	- - - - -	1
Punches , carpenters' and wheelers', 7 inch	large	1
	small	1
Rasp , coarse, half round, 12 inch	- - - - -	1

WHEELERS' AND SADDLETREE MAKERS' TOOLS—cont^d.General
Service.

Description of Articles.	No.	
Reels , chalk line, wood	1	
Rule , 2 feet, common	1	
Saws {		
	dovetail, brass back, 9 inch	1
	frame, hand, 15 inch	1
	hand, 26 inch	1
tenon, iron back, 14 inch	1	
Screws , thumb, 9 inch	1	
Scriber	1	
Set , saw, hand	1	
Shaves , spoke {		
	3 $\frac{1}{4}$ inch	1
2 $\frac{1}{2}$ "	1	
Spanner , McMahon's, 15 inch	1	
Square , steel blade, 9 inch	1	
Stock , carpenters', with 24 bits	1	
Stones {		
	carpenters' oil, in frame	1
scythe, rag	1	

ROYAL ENGINEER SERVICE.

LIST OF TOOLS AND IMPLEMENTS FOR BRICKLAYERS
AND MASONS.

Approved 30th November 1875.

7901
963

PACKED IN A CHEST.

Description of Articles.	No.
Chest , tool, with lock and key	1
Bar , setting, masons', general and field service	1
Bevel , wood blade, 12 inch	1
Bob , plumb, with line for rules	1
Brush , whitewash, 9 oz.	1
Hammers , handled {	
	chisel point, 5 lbs.	2
mash	1
Level , masons', platelayers'	1
Lines , bricklayers' and masons'	1
Fins , iron, line, bricklayers' and masons'	pair 1
Rule , 2 feet, fourfold collarmakers'	1
Trowels , bricklayers', 12 inch	2

APPENDIX XVI.

APPENDIX TO PARAGRAPH 237.

Royal
Engineer
Service.

LIST OF TOOLS AND IMPLEMENTS FOR WHEELERS,
JOINERS, AND SADDLETREE MAKERS.

Approved 30th November 1875.

7901.
963.

PACKED IN TWO CHESTS.

Description of Articles.		No.	
Chests , tools, with locks and keys -	-	2	
Adze , unhandled, wheelers'	-	1	
Augers , screw	{ 1½ inch -	1	
	{ 1¼ " " -	1	
	{ 1 " " -	1	
	{ 1 " " -	1	
	{ 7/8 " " -	1	
	{ 3/4 " " -	1	
	{ 1/2 " " -	1	
Axe , helved, broad, carpenters', 6½-lb.	-	1	
Bar , crow, 7-lb.	-	1	
Basket , tool, carpenters'	-	1	
Bevels , steel blade, 12-inch	-	2	
Blades , awl, brad -	-	24	
Brush , glue (sash tool, No. 6)	-	1	
Buzzes , wheelers'	{ 5/8-inch	1	
	{ 3/4 " "	1	
Can , tin, oil, feeding screw top	-	1	
Chisels	{ boxing, wheelers' { large -	1	
	{ " " { small -	1	
	{ hand, cold, carpenters', &c., 8 x 3/4-inch	2	
	{ firmer, handled { 1-inch	" "	1
		" "	1
		" "	2
		" "	2
		" "	2
		" "	2
	{ mortice, handled, 1/2-inch	1	
{ socket, handled, 1 1/2 " "	2		
Compasses , wing, 10-inch -	pair	1	
Drivers , screw	{ 12-inch -	1	
	{ 6 " " -	1	
Files	{ saw, 3 square { hand, 5 1/2-inch	18	
	{ " " { tenon, 4 " "	6	
	{ bastard { 1/2-round, 14-inch -	2	
	{ round, 12 " "	2	
Gauges , mortice -	-	2	
Gimlets	{ nail, common -	6	
	{ spike, 5/16-inch -	8	
Glue	-	lb. 1	
Gouges , handled	{ boxing, 1 1/2-inch -	1	
	{ socket, 1 " "	1	
	{ scribing or firmer { 5/8-inch	1	
	{ " " { 3/4-inch	2	
Hammers , handled	{ shoeing, wheelers' -	1	
	{ riveting { 24 oz. -	1	
	{ " " { 12 oz. -	1	
	{ collarmakers' or saddlers' -	1	

WHEELERS', &C. TOOLS—cont^d.Royal
Engineer
Service.

Description of Articles.		No.
Handles,	{ adze, wheelers' - - - - -	1
	{ auger - - - - -	2
	{ awl, brad - - - - -	3
	{ file, small - - - - -	4
Knife,	carpenters' and wheelers' drawing - - - - -	1
Lines,	chalk, carpenters', with $\frac{1}{4}$ lb. of chalk - - - - -	2
Mallets,	carpenters' - - - - -	2
Pencils,	carpenters' black lead - - - - - doz.	1
Pins,	iron drawbore, 12-inch - - - - -	2
Planes	{ double iron { jack - - - - -	1
	{ double iron { smoothing - - - - -	1
	{ double iron { trying - - - - -	1
	{ plough, with 8 irons - - - - -	1
	{ skew, rebate, $1\frac{1}{2}$ -inch - - - - -	1
	{ bead, $\frac{3}{8}$ -inch - - - - -	1
Pot,	glue, double copper, 1 pint - - - - -	1
Punches	{ carpenters' and wheelers', 7-inch, small - - - - -	1
	{ smith's hot $\frac{3}{8}$ -inch - - - - -	1
Rasp,	coarse, $\frac{1}{2}$ -round, 12-inch - - - - -	1
Reel,	chalk-line, wood - - - - -	1
Rule,	2 feet, four-fold, collarmakers' - - - - -	1
Saws	{ frame, hand, 15-inch - - - - -	1
	{ dovetail, brass back, 9-inch - - - - -	1
	{ hand, 26-inch - - - - -	1
	{ tenon, iron back, 19-inch - - - - -	1
	{ turning or compass - - - - -	1
Screw,	thumb, 9-inch - - - - -	1
Set,	saw, hand - - - - -	1
Shaves,	spoke, $3\frac{1}{4}$ -inch - - - - -	2
Spanner,	McMahon's, 15-inch - - - - -	1
Squares	{ iron, figured - - - - -	1
	{ steel blade { 9-inch - - - - -	1
	{ 4 " - - - - -	1
Stocks,	carpenters', with 24 bits - - - - -	1
Stones	{ rag, scythe - - - - -	1
	{ carpenters', oil, in frame - - - - -	2
Vices	{ bench, portable, saddletree-makers' - - - - -	1
	{ hand, 16 oz. - - - - -	1

**Tools for
Trades.**

**PROPORTION OF TOOLS TO BE ISSUED TO A REGIMENT
FOR THREE CARPENTERS.**

PACKED IN THREE CHESTS, AND FORMING ONE SET.

Description of Tools.	No.
Adzes, unhandled, carpenters	2
{ 1 1/2 inch	1
{ " "	1
Augers, shell { 1 1/2 inch	1
{ " "	1
{ " "	1
{ " "	1
Axes, unhandled, broad, carpenters, 6 1/2 lb.	3
Bags, tool, carpenters	3
Bevels, steel blade 12-inch	3
Blades { awl brad	12
{ saw, keyhole 9"	3
Brushes, glue (No. 6 sash tool)	2
Compasses, common, 7-inch, pairs	3
Chests, tool, empty, carpenters, General Army Service	3
{ 1 1/2 inch	2
{ 1 3/4 " "	2
{ 1 1/4 " "	2
Chisels, firmer, handled { 1 " "	2
{ 3/4 " "	2
{ 3/8 " "	2
{ 1/2 " "	2
{ 1/4 " "	2
{ 1/8 " "	2
{ hand, cold	3
{ carpenters, &c. { 8-in. x 3/4-in.	3
{ " " { 8-in. x 1 in.	3
Chisels { mortice, handled { 1/2 inch	3
{ " " { 3/4 " "	3
{ " " { 1 " "	2
{ socket, handled { 1 " "	2
{ " " { 1 1/2 " "	2
Drivers, screw { 14 inch	2
{ 6 " "	3
{ flat taper, 14 inch	3
Files { bastard { 1/2 round { 14 " "	3
{ " " { " " { 10 " "	3
{ " " { round 14 inch	3
{ saw, 3 { hand, 5 1/2 " "	3
{ square { tenon, 4 " "	3
Gauges { cutting	1
{ mortice	3
{ single	2
Gimlets { nail, common	6
{ spike { 3/8 inch	6
{ " " { 1/4 " "	6

APPENDIX XVI.

APPENDIX TO PARAGRAPH 243.

Tools for Trades.

TOOLS FOR CARPENTERS—cont^d.

		Description of Tools.	No.
Gouges,	handled	socket or pecking, 1 inch	2
		firmer { $\frac{1}{2}$ inch	3
		" $\frac{3}{4}$ "	3
		" 1 "	2
Hammers,	handled	claw { 28 oz., large	1
		" 20 " small	1
		riveting { 24 oz. small	2
		" 8 " "	4
Handles		auger	12
		awl brad	2
		adze, carpenters	3
		axe, broad	3
Hatchets,		hand, handled, carpenters or bench, 3 lb.	3
Lines,		chalk, carpenters	3
Mallets,		carpenters	3
Pads or handles,		wood, keyhole saws	3
Pencils,		carpenters, black lead	9
Pincers,		carpenters	pairs 3
Planes		bead, $\frac{3}{8}$ inch	2
		hollows and rounds	pairs 2
		jack, double iron	3
		phillister, sash	2
		plough, with 8 irons	1
		smoothing, double iron	3
	trying " "	2	
Pliers,	pair	bright, flat nose	2
		" side, cutting	1
Pot,		glue, double iron, one quart	1
Punches,		carpenters and wheelers, 7 in. { large	3
		" small	3
Rasps,	coarse	flat, 12 inch	2
		$\frac{1}{2}$ -round, 12 inch	1
Rules,		2 feet, common	3
Reels,		for chalk line, wood	3
Saws		frame, hand, 15 inch	3
		hand, 26 inch	3
		tenon, iron back, 14 inch	3
		dove tail, brass back, 9 inch	2
Sets,		saws, hand	3
Shaves,	spoke	4 inch	2
		" $3\frac{1}{2}$ "	2
Spanners,		MacMahon's, 15 inch	2
Squares,	steel blade	12 inch	3
		" 9 "	3
Stocks,	carpenters, with 24 bits, as follows, viz. :—	centre	7
		countersunks { flat	1
		" rose	1
		dowelling, sash with collar	1
		gouge	6
		nose	5
		rimers, square	1
		screw drivers	1
		taper	1
		Total	24
Stones		oil, in frame, carpenters	3
		grind, F.S., in frame, 18 inch	1

APPENDIX XVI.

APPENDIX TO PARAGRAPH 243.

Tools for
Trades.TOOLS FOR A TINMAN'S CHEST—cont^d.

Description of Articles.		No.
Chests , tool, empty, tinman's	- - - - -	1
Chisels , smiths, rod, cold	- - - - -	1
Compasses , wing, 10 inch	- - - - - pairs	1
Diamond , glaziers	- - - - -	1
Dresser , plumbers	- - - - -	1
Hammers , handled	{ glaziers	1
	{ plumbers, 3 lbs.	1
Hook , shave, plumbers, 1½ inch	- - - - -	1
Iron , soldering, { 4 lbs.	- - - - -	1
	{ plumbers, 1¾ lbs.	1
Kettle , camp, light	- - - - -	1
Knives	{ cutting, plumbers	1
	{ hacking, glaziers	1
	{ palette, 9 inch	1
	{ stopping, 5 inch	1
Ladies , iron, melting, 6 inch, pint	- - - - -	1
Mallet , bossing, plumbers	- - - - -	1
Pipe , blow, 12-inch	- - - - -	1
Pliers , { bright, round-nosed, small	- - - - -	1
	{ pairs, gas, 2 hole	1
Pot , iron, melting	- - - - -	1
Rule , { flat, 2 feet	- - - - -	1
	{ glaziers, boxwood, T, 2 ft. 6 in.	1
Square , iron, figured	- - - - -	1
	{ 2 inch	1
	{ 1½ "	1
Tongs , gas, pairs	{ 1 "	1
	{ ¾ "	1
	{ ½ "	1

PROPORTION OF TOOLS TO BE ISSUED TO A REGIMENT
FOR TWO SMITHS (ONE A SHOEING SMITH).

PACKED IN ONE CHEST, AND FORMING ONE SET.

Description of Articles.		No.
Aprons , leather, basil, brown	- - - - -	2
Bag , tool, farriers	- - - - -	1
Bits , braces, smiths	{ countersunk { flat	1
	{ rimer { rose	1
	{ square	1
Bows , drill, smiths, steel	- - - - -	1
Brace , iron, smiths	- - - - -	1
Callipers , smiths, 10-inch	- - - - - pair	1
Chest , tool, empty, general Army service	- - - - -	1
Chisels	{ smiths rod, cold	4
	{ farriers, hot	2
Compasses , wing, 10-in.	- - - - - pair	1
Drills , smiths or armourers (set of 5)	- - - - - sets	2

APPENDIX TO PARAGRAPH 243.

APPENDIX XVI.

TOOLS FOR SMITHS—cont^d.Tools for
Trades.

Description of Articles.		No.	
Drivers, screw-	15-inch - - - - -	1	
	6 " - - - - -	1	
	flat taper {	14-inch - - - - -	1
		10 " - - - - -	1
	½-round .. {	8 " - - - - -	1
		14 " - - - - -	1
Files, bastard	10 " - - - - -	1	
	round - {	12 inch - - - - -	1
	rubbers, ½-thick, 16-inch	8 " - - - - -	1
		10 inch - - - - -	1
	square - {	8 " - - - - -	1
		12 " - - - - -	1
	3-square or triangular - {	7 " - - - - -	1
		5 " - - - - -	2
	warding - {	3½ " - - - - -	2
		3½ " - - - - -	2
Hammers	handled farriers {	pointing - - - - -	1
		shoeing - - - - -	1
	unhandled - {	sledge, farriers, 9½ lbs. - - - - -	2
		smiths, 3 lbs. - - - - -	2
Handles	hammers {	sledge - - - - -	2
		hand - - - - -	2
	file, middling - - - - -	16	
Knives, farriers	drawing - - - - -	1	
	searching - - - - -	1	
Pincers, farriers	- - - - -	pairs	
Plates, breast, smiths, iron	- - - - -	1	
Pliers, bright, flat nose	- - - - -	pairs	
Pokers, smiths or farriers	- - - - -	1	
Punches, smiths	cold, 7-inch - {	¾ inch - - - - -	3
		1 inch - - - - -	1
	hot - {	¾ " - - - - -	1
		1 " - - - - -	1
Rasp, farriers, 15-inch	- - - - -	1	
Saw, frame, bow, cutting metal, 10-inch complete	- - - - -	1	
Slices, farriers or smiths	- - - - -	1	
Spanners, McMahon's, 15-inch	- - - - -	1	
Stakes, farriers, pointing	- - - - -	2	
Stamps, farriers	- - - - -	1	
Stock, drill, steel, smiths or armourers	- - - - -	1	
Tongs	farriers, shoeing - {	- - - - -	1
		- - - - -	1
	forge - {	smiths, large or close, 3 lbs. - - - - -	1
Vice, hand, 16 oz.	- - - - -	- - - - -	1
		- - - - -	1

N.B.—Anvils, bellows, and standing vice, being fixtures, are a part of the building.

APPENDIX XVII.

Regulations for the Inspection, on Service, of Rifled Guns, referred to in Paragraph 319.*Part I.—General Directions.*

1. All rifled guns will, as far as possible, be examined regularly after the following periods of service :—

9-inch and heavier calibres, after every 50 rounds with projectiles.

8-inch, 7-inch muzzle-loading and breech-loading, and 64-pr. muzzle-loading, after every 100 rounds with projectiles.

40-pr. and smaller guns, whether breech-loading or muzzle-loading, after every 150 rounds.

Period of service at which examination is to take place.

2. At all foreign stations the examination will be made under the direction of the Officer Commanding the Royal Artillery in the District, by an Inspector of Warlike Stores, should there be one at the station, or, if not, by some other competent person. A report of the examination will be made on W. O. Form No. 1476,* and forwarded through the same channels as laid down for the Annual Return (*see* § 11). Impressions will not be sent with the report unless there is any doubt as to the serviceability of the gun or guns examined (*see* §§ 24, 25, 29); but should any gun appear to be in an unserviceable state, or to require re-venting or other repairs beyond what can be effected on the spot, impressions will be forwarded with the report, for the information of the Director of Artillery and Stores, who will give such directions as he may think desirable.

Examination of guns in Royal Artillery charge abroad.

If guns found unserviceable, or requiring re-venting or repair, as above, be mounted in an important position, or if local circumstances render their immediate exchange necessary, they will at once be exchanged if practicable, by requisition on the Commissary of Ordnance Stores, approved by the General Officer Commanding. In such cases the requisition, after being complied with, will be forwarded by the Commissary to the Director of Artillery and Stores.

3. Officers Commanding Her Majesty's ships will, from time to time, as the exigencies of the Service permit, apply to the Commissary of Ordnance Stores at the station, to cause their rifled guns to be examined unless they themselves have at disposal the means of effecting the service. The Commissary, on receipt of such demand, will, if abroad send a requisition, to have the service performed, to the Officer Commanding the Royal Artillery, and, if at home, to the Controller, Royal Arsenal, Woolwich, except in the Southern or Western Districts, in which the demand will be dealt with at Portsmouth or Devonport Gun Wharf, and the examination will be carried out in the manner laid down for Garrison Ordnance, by the Inspector of Warlike Stores, if there be one, or otherwise by some competent person. On the completion of the examination, the result will be notified to the Commissary on W. O. Form 1476, and will be forwarded by him to the Officer Commanding

Examination of Naval guns.

* In such cases the word "Special" will be substituted for "Annual" in the heading of the form.

APPENDIX XVII.

APPENDIX TO PARAGRAPH 319.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

the vessel; who will take such steps as he may deem necessary, under the orders of the Senior Naval Officer. All requisitions from Officers Commanding Her Majesty's ships for the re-venting or exchange of guns will be made through the Commissary of Ordnance Stores, and will be complied with under the rules laid down for supplying warlike stores to Her Majesty's vessels. The Commissary will report his proceedings to the Director of Artillery and Stores.

Examination of
guns in Royal
Artillery
charge at
home.

4. For Home service, the following arrangements will be carried out for guns in Royal Artillery charge:—

As soon as a gun has fired the number of rounds, since previous examination, laid down in the regulations, a notification of the circumstance (*see* Form p. 223) will be sent in to the Director of Artillery* by the Officer Commanding the District, and practice from the gun will cease until its condition has been reported upon. At the end of every quarter an examiner and an artificer from the Royal Gun Factories will visit each district, and examine those guns which have fired the prescribed number of rounds and perform such repairs as may be required.† Should there be no guns in a district requiring such examination or repair, the district will not be visited in that quarter.

Naval Reserve
Batteries.

5. Officers in charge of Royal Naval Reserve Batteries will apply to the Commissary of Ordnance Stores, to have such of their guns, as may require it, placed on the list for the next quarterly inspection of the district in which the port they are stationed at may be situated.‡

In case of emergency they will apply through the same channel for the immediate services of examiners and artificers from the Royal Gun Factories.

Inquiry to be
made imme-
diately into
the cause of
accidents.

6. When any accident occurs either at home or abroad, such as the bursting of a shell in the bore, the splitting of a breech-loading vent-piece, &c., immediate inquiry will be made into the circumstance, and the gun examined. If the Commanding Officer considers the damage to be of importance, he will send without delay a report of the circumstances through the same channel as his Annual Return, forwarding if necessary for the illustration of his report, gutta-percha impressions of the damage done to the gun. A similar course will be pursued in regard to naval guns.

Memorandum
of Examina-
tion.

7. The "Memorandum of Examination" of every rifled gun (*see* § 21) must be in possession of the officer in charge of that gun; and when a gun is returned into, or issued from store, this memorandum must accompany it. The number of rounds that have been fired will be accurately entered in the memorandum, which will be carefully preserved, as containing important information concerning the gun.

Lacquering
bores in store.

8. All rifled guns that are likely to remain in store some time prior to examination, will have their bores cleaned and lacquered. This especially refers to guns sent home from foreign stations, which are often received in a very rusty and dirty state.

* If possible a gutta percha impression of vent should accompany the return, as the Director of Artillery after its inspection may be able to allow of continuance of practice from the gun without waiting for Quarterly Inspection.

† A copy of the Examiner's Report upon W.O. Form 1476, will be furnished by him to the Officer Commanding the R.A. District, or H.M. Ship, where the guns are mounted, to enable him to complete his Annual Return as prescribed in §§ 13, 14, 16.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

9. It is necessary, in order that rifled guns may be always kept in a serviceable condition, that the bores of such guns, whether breech-loading or muzzle-loading, from which practice is carried on, be kept slightly oiled to prevent rusting. At the close of each day's practice they will accordingly be washed and placed under metal, and as soon as dry will be oiled with a greasy sponge, and the muzzles closed with tampeons.* When the annual practice is over and when guns are not in constant use, the bores will be lacquered, and the bright parts about the breech of breech-loading guns greased with the following mixture—†

Tallow—3 parts,

Lard oil—1 part,

White lead—about 1 lb. to a gallon ;

the vent-pieces and all other fittings, except the breech screws, will be removed. The old method of greasing the bores of the breech-loading guns, and closing the breech and muzzle with wooden plugs, is discontinued.‡

10. Excessive polishing injures the sights of rifled guns ; they should be kept clean by wiping, and not be polished or burnished.

Bores to be kept oiled or lacquered.

Sights not to be polished.

Part II.—Rules for furnishing the Annual Return.

11. Returns according to the accompanying Form (W. O. No. 1476§) will be sent yearly, by Officers of Artillery in command of Districts, except in North America, to the Director of Artillery and Stores, on the 1st of June. Those from the North American Artillery Stations will be furnished on the 1st November. Officers commanding vessels of war of every description having guns on board, and likewise the Royal Marines, Royal Naval Reserve, and Coast Guard, having ordnance in their charge, will furnish returns on 1st January, through the Admiralty, to the Secretary of State for War.||

Date of furnishing the Annual Return.

12. The number of the gun, the numeral of pattern, the initial of factory, and date, are all to be found on the left trunnion. The weight is marked on the top of the gun, in front of the vent. Under the head of "Nature," the proper name of the gun, with its nominal weight, will be entered ; as for instance, "9-inch M.L. of 12 tons," "40-pr. B.L. of 35 cwt." The correct designation of all rifled guns will be taken from the official List of Changes of Ordnance, published with the Monthly Army Circular, in which a description of every gun appears when finally approved.

Descriptive marks.

Nature.

13. The column headed "Date of last examination" will be filled in from the date of the last inspection, made in accordance with Part I., by an Inspector of Warlike Stores, or other qualified person.

Date of last examination.

14. The "Condition of Bore" and "Sentence" will be taken from the last report made by the Inspector of Warlike Stores, or other

Condition of bore and sentence.

* This, however, will not prevent rust for any length of time ; and all guns, more particularly those exposed to the action of the sea-spray, should be wiped out and freshly oiled from time to time.

† For a 7-inch gun, 4 oz. ; for a 40-pr., 3 oz. will be required.

‡ See § 1,804, Changes in Artillery Material, &c.

§ This Return differs slightly from those hitherto issued, having been altered for reprinting. Old Forms of Returns should be altered as far as possible to suit.

|| In accordance with Admiralty Circular $\frac{\text{No. 22}}{\text{N.}}$, 9th April 1868.

APPENDIX XVII.

APPENDIX TO PARAGRAPH 319.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

examiner conducting the periodical or special examinations ordered in §§ 1, 2, 3, 4, 5, 6 of these Regulations; but if the gun has not been examined, owing to only a few rounds having been fired from it, these columns may be left blank, unless the Commanding Officer should see cause to call special attention to the gun (*see* § 26).

- Number of rounds fired.** 15. The "Number of rounds fired" at the date of making the Return, will be very carefully entered under the several headings; it is exceedingly important, for sake of the record, that the number should be given correctly. The number of rounds fired with projectiles since previous examination should also be given.
- Condition of fittings.** 16. The columns regarding the condition of the fittings of the breech-loading guns, and the vents of muzzle-loading guns, will be filled in from the Reports of the Inspector of Warlike Stores, or other examiner.
- Column of "Remarks."** 17. Particulars of any special defect on the exterior or other part of the gun will be noted in the column of "Remarks," if not entered in any other part of the Return; as also, any peculiar circumstance, such as the re-venting of a muzzle-loading gun, the bursting of a shell in the bore, the fracture of fittings, &c. Reference will be made, when necessary, to explanatory documents.
- Unused guns.** 18. Guns which have not been fired since the previous Return will be entered in the Return; but the columns headed "Condition of bore," "Sentence," "No. of Rounds fired," and condition of fittings, need not be filled in, the remark "Not used since (*)" being entered against them.

Part III.—Instructions for the guidance of Examiners in the Inspection of Rifled Ordnance.†.

Preparing a gun for examination.

19. When a gun is to be examined, the bore will be thoroughly cleaned and dried; it is not possible to detect small defects which may sometimes be of importance, if the bore be in a rusty or very greasy state. If care has previously been taken in keeping a gun tolerably clean, it will probably be sufficiently prepared for examination by washing, brushing, and drying with tow or a clean sponge-head. If, however, there be hard rust which will not yield, or a thick coating of lacquer or grease, the bore may be cleaned either by firing, if circumstances admit, one or two scaling charges, about one-third the full service charge, without projectiles, which will usually loosen the scale, or by the use of hot water and potash, in the following manner:—

Method of cleaning with potash water.

20. About a gallon of boiling water is poured on one pound of black American potash, and an old sponge covered with a canvas cap, or some substitute to make it tight to the bore, is dipped into the solution. The bore is then rubbed till the dirt is loose, when the hard brush will remove it; and the bore is then wiped dry with tow, &c., and slightly oiled. The potash water must be used very hot, and the sponge must be very tight, or the process is ineffectual. If the dirt be very thick in the small grooves of the B. L. guns, a common pricker with blunted point is useful. No sharp-edged or pointed scrapers will be employed

* Here fill in date.

† For list of tools, brushes, &c., indispensable to the proper examination of rifled guns, *see* page 221.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

for cleaning the bores of rifled guns; they are unnecessary, and are liable to injure the rifling.

21. Before the Examiner commences his inspection of a gun, he should be in possession of the "Memorandum of Examination" issued with it. In this memorandum the material of the barrel is given, and, in the case of the muzzle-loading ordnance, a short description of the construction, with a wood-cut showing the gun in section. The defects in the gun at the time of its issue, the number of rounds it has fired, and the subsequent examinations are also stated.

Inspector to have the "Memorandum of Examination."

22. The barrel being in a fit state, the Inspector will proceed to examine it by aid of a lamp and a sharp pointed pricker. The stave of the pricker should be graduated in inches, for measuring the distance of the defect, which is recorded in inches from the muzzle, except when one occurs in the powder chamber of a breech-loader, when the distance of the defect is measured from the breech end of the barrel. The position round the gun is recorded in all cases as "up," "down," "right," "left," or in intermediate positions, as "right of down," &c., &c., looking from the muzzle.

How bores are to be examined and defects noted.

23. The Examiner should in all cases take gutta-percha impressions of the powder chamber and seat of shot. He should also take impressions of any parts of the bore in which he has reason to believe that new defects exist, or that old ones have increased to an important extent.

When impressions are to be taken.

24. All rifled barrels are liable to "tool marks" caused by the irregularities during manufacture; to "dents" caused by the bursting of a shell in the bore; to "scoring" caused by the rush of gas over the top of the shot; and to the "wearing of the grooves" from friction with the studs of the projectile.

Probable defects in barrel.

Wrought-iron barrels are also liable to "coil marks," where the line of coil is seen round the barrel; to "defective welds," which are "coil marks" of a deeper and more important kind; to "specks" caused by imperfections in the working of the metal; and to "flaws," which are larger defects of the same nature.

Barrels made of steel or of solid forged metal are liable to "longitudinal cracks," which may develop into splits.

25. In sentencing a gun, it should be borne in mind that the defects in wrought-iron barrels are usually numerous but unimportant, while those in steel barrels are rare, but of much moment.

Sentencing.

In the powder chamber, however, no defect is unimportant, and should any symptoms of yielding in this part of the bore be detected, the gun should be provisionally condemned.

Scoring, dents, defective welds, and flaws, in barrels of coiled wrought iron, are of but little consequence when clear of the powder chamber, unless they have attained an unusual depth or extent. The Examiner, in these cases, must use his judgment in passing sentence, taking care to err, if at all, on the side of caution.

A crack in a steel barrel is sufficient to warrant provisional condemnation, but care must be taken to discriminate between a crack and a superficial streak.

If, from the explosion of a shell or other cause, the metal be merely set up in the bore, it should be filed down; but if the bore be much cut up the gun should be provisionally condemned.

It should be remembered that converted cast-iron guns are more dependent than wrought-iron guns on the strength of their tubes.

APPENDIX XVII.

APPENDIX TO PARAGRAPH 319.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

- All old defects not to be entered in return. 26. When filling up the column of the Return headed "*Condition of Bore,*" &c., it will not be necessary to enter all the original defects. It will suffice to make the entry "*Condition unchanged,*" unless there have been any new or increased defects detected; in which case the Examiner will enumerate them in the Return, and forward gutta-percha impressions.
- Examination of vent. 27. It is most important that the vent be carefully observed, as indicating the state of the gun. When the channel has been thoroughly cleared and scraped, it will be gauged with the set of gauges issued for the purpose. [It is not uncommon, in copper-bushed guns, to find a "*choke,*" *i.e.*, metal set up in the vent near the bottom. This should be removed by a drill or rimer, before the gauge is taken.] When gauged, a clear impression of the bottom will be taken.
- When to re-vent rifled muzzle-loading guns. 28. Rifled muzzle-loading guns are now bushed with specially hardened copper, and therefore probably will not, as a rule, require re-venting till a considerable number of rounds has been fired, but hitherto there has been but little experience of the effect of much firing on the vents of heavy guns, except in the case of experimental guns, many of which have been vented in an experimental manner. It is therefore but little known how far it is safe to allow them to become worn, and until further experience is acquired the following directions are laid down for the guidance of Examiners.
- Sentence of vent. 29. No gun on service, of 9-inch or lesser calibre, will be ordered for re-venting on account of increase to the size of the vent itself, after the "*choke*" is removed, unless the $\cdot 3$ -inch gauge passes down; nor for irregular wear at the bottom, unless the cavity measures $\cdot 5$ -inch in diameter at the distance up the vent of $\cdot 25$ -inch measured on the impression. The gun will not be ordered for re-venting on account of a hollow ring formed round the vent-bush, unless it be at least $\cdot 1$ -inch in depth or width, or unless it be irregular and jagged, so as to be likely, in the opinion of the Inspector, to retain a piece of cartridge. No gun will be condemned on account of hair-lines radiating from the vent, unless the defect be 1 inch in length; except when it is directly to the front or rear, in which case it might develop into a crack along the barrel, and then the limit for condemnation will be $\cdot 5$ -inch. Heavier guns than the 9-inch will be treated exceptionally.
- Examination of breech-screw, lever, tappet, and keep-pins. 30. The breech-screw will be examined with the *straight-edge*, in order to ascertain that the face is quite flat and true; if it be not, it will be filed; the thread should not be broken or burred, but a considerable portion may be removed, if injured, without destroying the efficiency of the screw.
- Vent-piece and breech bush. The lever and tappet should be sound; the lever handles of naval guns are sometimes broken off, but the lever can still be used in this state, though not so conveniently. The keep-pins must be sound.
31. The vent-piece is the most important fitting, and should be perfectly sound, neither cracked nor bulged. The back and sides when tested by the straight-edge, should be quite flat and true; the fracture of vent-pieces is frequently owing to the back not being true to the face of the screw. The copper ring on the vent-piece, as well as the breech-bush at the end of the barrel, must be sufficiently high to prevent the action of the gas on any part of the iron. The angle face of the 7-inch vent-pieces should be flat, and should work truly against the end of the barrel, and the "*nose*" should fit closely, but not too tightly, into its

REGULATIONS FOR INSPECTION OF RIFLED GUNS—contd.

place. The bush of a breech-loading gun will be sentenced to be renewed, if found to be so much expanded that the gas could escape between it and the tin cup or vent-piece. The copper bushes in the neck of the vent-piece should be in good order; if they are so much worn that a 0·3-inch gauge can pass through the friction tube is liable to be pulled out without being fired, and the bushes will be renewed from the spare sets issued for the purpose. A cavity frequently forms at the angle of the vent channel, but this (which should be examined with a probe) does not entail the immediate condemnation of the vent-piece, unless the Examiner considers it dangerously large.

32. Very considerable defects may exist on the exterior of a wrought-iron gun, without the strength being affected. Hardly an instance has yet occurred with the present class of rifled ordnance, of the exterior of a gun failing; unless the interior has first shown signs of weakness, or been strained in an extraordinary manner.

Defects on exterior of rifled guns.

Defective welds on the exterior near the muzzle are sometimes developed in the B tube; these are of no practical importance, and a gun should not be condemned on such grounds alone, though it should be exchanged when an opportunity offers.

If it be found that a shell has burst in the bore, the exterior will be thoroughly scraped with old swords, and cleaned (with potash water, if necessary), in order to ascertain whether it is perfectly sound.

It occasionally happens with wrought-iron guns that on firing the outer coils shift; if on examination the shifting is found considerable, the gun will be provisionally condemned, but a slight shift, which is sometimes perceptible when the gun is first used, and which has gone no further afterwards, may be disregarded. Unless there be reason to suspect damage on the exterior, it will not be necessary to scrape the whole of the paint off the exterior whenever a gun is examined. Large defects on the exterior are noted on the "Memorandum of Examination."

33. Impressions in gutta-percha of the bores of rifled guns are taken with an apparatus issued for the purpose, which will take impressions of considerable length (*see* § 1312, List of Changes), or should this instrument not be available, wood blocks, which can be made by any carpenter, can be used in the manner described in § 1625, List of Changes. It requires, however, some practice to work with these blocks; and they cannot be relied on to give as perfect impressions as the instrument.

Method of taking impressions.

34. Impressions of the vents will be taken with the improved instrument for impressions of the bores, or they may be taken with the instrument provided among the tools for venting ordnance, if this instrument and the proper blocks are at hand.

Impressions of vents.

35. When an impression is forwarded with a Return, for report or decision, a label will be gummed to the back, showing the name of the station, the date of taking the impression, the nature and number of the gun, the position of the defect (if it be in any part but the vent), taken according to the directions in § 22, and the direction of the muzzle. The impression should be reduced to the smallest dimensions compatible with showing the whole of the defect. Care should be taken that the impression is not touched when soft, and that it is packed to escape injury.

Impressions to be labelled.

APPENDIX XVII.

APPENDIX TO PARAGRAPH 319.

REGULATIONS FOR INSPECTION OF RIFLED GUNS—cont^d.

How to prepare the gutta-percha.

36. The common kind of gutta-percha used for soles of boots is suitable for the purpose. It can be used over and over again, and need never be thrown away if a little fresh material be added from time to time, to prevent it from becoming brittle. For delicate impressions, however, new gutta-percha should be used. It should not be allowed to be mixed with dirt or grit, and it should be kept in water when not in use.

The method of applying the gutta-percha is as follows:—A sufficient quantity having been softened by being put into boiling water, is worked and kneaded on a smooth hard board, until the air and water are expelled and an even surface obtained. A lump is then placed on the pan of the instrument (which should have been previously fitted with a pad of gutta-percha) and screwed up against the vent, or other part of the bore, of which an impression is to be taken. It is there left till cold, about 10 or 20 minutes, according to the weather, when the instrument is withdrawn.

Wax composition for impressions.

37. Wax composition, which may be used instead of gutta-percha for taking temporary impressions for examination, is made of beeswax 2 parts, treacle 1 part, soft soap 1 part. The wax should be melted over a slow fire in an iron pot, the treacle being added first, and mixed well by stirring; and lastly the soft soap, a little at a time. The wax must be kept in motion, and, when thoroughly mixed, poured out, and made into balls when cool. This composition being soft, is always ready for use, but is easily destroyed by handling. The cushion or pad of gutta-percha will be removed from the pan of the instrument before the wax composition is applied.

APPENDIX XVIII.

APPENDIX XVIII.

TABLE of FORMS and BOOKS employed in connexion with ARMY EQUIPMENTS.

W.O. No.	Subject.	Description.	Service.
164	Regimental equipment	Account ledger	Cavalry.
239	" "	" "	Infantry.
389A	" "	" "	Infantry. Brigade Depôts or Single Depôts.
188	" "	" "	Royal Artillery. Field battery.
243	" "	" "	Royal Artillery. Garrison battery.
240	" "	" "	Royal Artillery. Staff field brigades.
241	" "	" "	Royal Artillery. Staff garrison brigades.
254	" "	" "	Royal Engineers. Troop.
250	" "	" "	" " Company.
204	" "	" "	Army Service Corps. Transport Branch, Company.
208	" "	" "	Army Service Corps. Supply Branch, Company.
205	" "	" "	Army Service Corps. T. Branch, Staff.
258	" "	" "	* Supernumerary Staff, Royal Engineers.
"	" "	" "	* Staff Clerks and Military Police, Adjutant-General's and Quartermaster-General's Departments.
"	" "	" "	* Recruiting Staff.
"	" "	" "	* Gymnasia Staff.
"	" "	" "	* District Staff, Royal Artillery.
443	Arms	Requisition	All regular services.
444	"	Delivery voucher	" "
445	"	Receipt	" "
446	Materials for repairing arms	Requisition	" "
447	"	Delivery voucher	" "
448	"	Receipt	" "
449	"	Expense	" "
452	Accoutrements and pioneer's appointments.	Requisition	" "
453	"	Delivery voucher	" "
454	"	Receipt	" "
455	Materials for repairing accoutrements.	Requisition	" "
456	"	Delivery voucher	" "
457	"	Receipt	" "
458	"	Expense	" "
459	Materials for browning and preserving arms.	Requisition	" "
460	"	Delivery voucher	" "
461	"	Receipt	" "
462	"	Expense	" "
469	Implements, signalling; and instruments, musical.	Requisition	All services.
470	"	Delivery voucher	" "
471	"	Receipt	" "

* The same W.O. Book is employed for all these Accounts.

Table of Forms and Books employed in connexion with Army Equipments—*cont.*

W.O. No.	Subject.	Description.	Service.
508	Harness and saddlery - -	Requisition - -	All mounted regular services.
487	" " - -	Delivery voucher - -	" "
488	" " - -	Receipt " - -	" "
661	Materials for repairing harness, saddlery, and saddletrees.	Requisition - -	" "
490	" " - -	Delivery voucher - -	" "
493	" " - -	Receipt " - -	" "
509	" " - -	Expense " - -	" "
775	Camp equipment - -	Requisition - -	All regular services.
226	" " - -	Delivery voucher - -	" "
233	" " - -	Receipt voucher - -	" "
1528	Ordnance stores - -	Requisition - -	Royal Artillery.
607	" " - -	Delivery voucher - -	" "
609	" " - -	Receipt " - -	" "
1529	Artificers' tools - -	Requisition - -	All mounted regular services.
610	" " - -	Delivery voucher - -	" "
625	" " - -	Receipt " - -	" "
1530	Materials, repairing carriages - -	Requisition - -	" "
626	" " " - -	Delivery voucher - -	" "
627	" " " - -	Receipt " - -	" "
—	" " " - -	Expense " - -	" "
1456	Equipment in general (<i>blank</i>) - -	Requisition " - -	All services.
1457	Materials for repairs in general (<i>blank</i>).	" - -	" "
1219	Equipment in general (<i>blank</i>) - -	Receipt voucher - -	" "
1220	" " " - -	Delivery " - -	" "
1213	" " " - -	Transfer and conversion voucher.	" "
485	" " " - -	Expense voucher - -	" "
736	Ammunition - -	Requisition - -	" "
977	Blank ammunition for reviews and field days.	" - -	" "
243 } 244 }	Regimental repairs - -	Work books - -	" "
702	Manufacture or conversion	Expense voucher - -	All regular services.
610	Equipment of garrison ordnance	Statement of Artillery and Ordnance Store charge.	Royal Artillery districts.

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